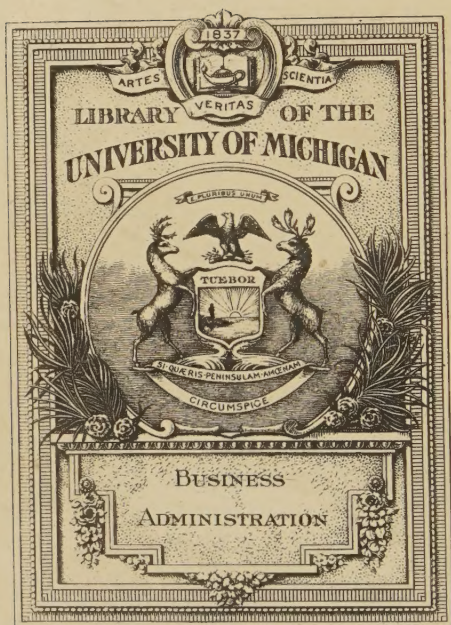




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ELEMENTS OF ACCOUNTING

TEXTBOOKS IN BUSINESS AND SOCIAL STUDIES

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PREFACE

This book, as its title indicates, has been prepared as an introductory text for pupils who have had no work in book-keeping or accounting. As such an introduction, it should be of use to any teacher who is conducting a beginning course in accounting.

The authors believe that several features of the present volume justify its addition to the field and will make it welcome to teachers. One of these features is the balance sheet method of approach. Experience has proved this to be the soundest pedagogical method in beginning a study of accounting. This approach first introduces the student to the two most important accounting reports. Next he is told about the ledger accounts from which the reports are prepared. Finally, the journals, which are the source of the ledger entries, are explained. In order that the student may not become confused by the details of the accounting procedure, a summary of the whole process of collecting accounting information, together with a bird's-eye view of the accounting records, is given before the accounting records are taken up in detail.

A second feature of the book is the treatment of accounting as a tool of management but without omitting proper consideration of bookkeeping technique. In the first five chapters, which make up Part I and Part II and which are designed to show the student why accounting information is needed, accounting is viewed as a method of compiling and classifying information and of presenting the results in a form which the manager can use. Throughout Part III,

which treats of the collecting and the recording of the information, and Part IV, which deals with the preparation of the financial statements, bookkeeping technique is thoroughly developed. Part VI is devoted to a discussion of the use of information in the various activities of business.

A third feature, and one which it is believed teachers will particularly welcome, comes from making it unnecessary for the student to relearn any part of the subject. Relearning has been too often necessary in the study of accounting. Relief from relearning is accomplished by presenting the correct accounting method the first time a topic is studied. For example, although the accounts are discussed before the journals, and entries are made directly in the accounts, the student is given to understand that in practice the transactions are first entered in a journal. Also in order to show the true use and purpose of the general journal the first time it is explained, the discussion of this journal is postponed until the other journals have been studied. The principle of correctly explaining a topic the first time, so often violated in introductory accounting texts, is consistently adhered to throughout this book.

Finally, no effort has been spared to make the book a teachable text. The student is introduced to the subject by being shown that accounting grows from and is a part of commonplace experience and develops according to the need for information. Controversial issues, which are no proper part of an introductory course, are reserved for more advanced study, as are those problems of theory many of which may never be a matter of agreement.

Each chapter is followed by a number of questions and problems. Teachers should not undertake to assign all of these, as there are more than can be done in a year's work. The large number, however, makes it possible for the teacher

to select those best suited to his students and to the time at his disposal.

In a general work of this sort it is impossible to acknowledge or even to recognize the source of all ideas. The authors, like all other writers, owe an obligation to the teachers and colleagues with whom they have worked.

Grateful acknowledgment is made to the editors, Leverett S. Lyon and Leon C. Marshall. Mr. Lyon gave valuable aid in the organization of the material and detailed suggestions at every stage of the writing. Mr. Marshall's encouragement of the project and his criticisms, particularly in the early stages of the work, were very helpful. C. O. Hardy of the Brookings Institution read the manuscript and offered suggestions in both organization and method of presentation. For whatever faults the book possesses, the authors, of course, take responsibility.

R. EMMETT TAYLOR.

RICHARD N. OWENS.

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PART I

ACCOUNTING REPORTS AS A SOURCE OF
INFORMATION

ELEMENTS OF ACCOUNTING

CHAPTER I

HOW ONE STUDENT LEARNED THE NEED FOR ACCOUNTING

PURPOSE OF THIS CHAPTER

To illustrate some of the uses of accounting

A study of accounting is a study of one method of gathering and using information that can be stated directly in money values. In accounting, all values are stated in terms of what property is worth in money. Although accounting may be most easily thought of as having to do with the records of a business conducted for profit, any organization or individual, receiving and disbursing money or property having a money value, has need for accounting records and reports. It is needed and used by individuals, clubs, and governments, as well as by business houses.

A simple illustration will serve to explain the nature of the data with which accounting deals and the need for accounting records and reports. Having considered that, we shall be in a position to consider in later chapters more complicated situations as they arise in business.

Accounting methods are used in preparing records and reports relating to the receipt and disbursement of cash.—Let us consider the experience of Wallace Jones when he was elected treasurer of the junior class at his school. Jones

had no clear notion of what was expected of him as treasurer, but he knew that he should collect the yearly dues of one dollar from each student. He was also told by the president of the class to "keep track" of all money received. Jones, therefore, listed each day the total of the cash received. At the end of the first week, he prepared from his record the following statement:

Cash received from class dues:

Monday	\$5.00
Tuesday	8.00
Wednesday	12.00
Thursday	15.00
Friday	20.00

Total collections for the week	<u>\$60.00</u>
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He then counted the cash which he held for the class and found that he had \$60.00, thus proving that his record was correct.

At the end of the month, Jones made a report showing the amounts he had collected during the four weeks. The report was as follows:

1st week	\$60.00
2nd week	45.00
3rd week	30.00
4th week	25.00

Total collections	<u>\$160.00</u>
Cash on hand	<u>160.00</u>

The class decided to give a class party. Jones paid all of the expenses of the party, obtaining receipts for the money he paid out. The expenses incurred in connection with the party were as follows: food \$20, music \$15, rent \$30, heat and light \$4, janitor service \$2. Before the next class meeting, Jones listed all of the expenses and made a complete record of cash receipts and disbursements as follows:

Cash received from class dues:

1st week	\$60.00	
2nd week	45.00	
3rd week	30.00	
4th week	25.00	
Total		\$160.00

Disbursements:

Food	\$20.00	
Music	15.00	
Rent	30.00	
Heat and light	4.00	
Janitor service	2.00	
Total		\$71.00

Cash on hand		\$89.00
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At the end of each succeeding month, Jones reported to his class the total receipts from class dues, and the amounts paid for various class activities. At the end of the year, he made the following report to be turned over to his successor:

Cash received from dues:

September	\$160.00	
October	70.00	
November	50.00	
December	35.00	
January	10.00	
February	5.00	
Total		\$330.00

Cash received from special assessments:

March	\$25.00	
April	15.00	
May	10.00	
Total		50.00
Total cash receipts		\$380.00

Disbursements:

Class parties	\$176.00	
Class play	66.00	
Picture in annual	10.00	
Books for library	35.00	
Athletic cup	15.00	
Debating cup	15.00	
Total		317.00
Cash on hand		\$63.00

In order that the class might be assured that the work had been correctly done, Jones' records and receipts were checked by the head of the Commerce Department. Jones submitted his records showing the amounts received and disbursed, together with receipts for cash paid out and a statement from a bank showing \$63.00 on deposit to the credit of the class. After checking the books and other papers, the head of the Commerce Department submitted to the class a statement to the effect that all the cash collected had been accounted for.

This simple case illustrates the following facts about the nature of accounting:

1. That accounting facts are expressed numerically and in terms of dollars and cents.
2. That accounting shows the sources from which cash is received and the purposes for which cash is disbursed.
3. That accounting records, if properly kept, can be verified by some one other than the bookkeeper.

In the illustration just given, the only transactions recorded were those relating to the receipt and payment of cash. In most businesses, however, the cash transactions are only a small part of the facts to be recorded. Some of the other uses of accounting in business will next be illustrated.

Accounting reports are used to show the financial condition of a business at any time.—To illustrate the way accounting reports are used to show the financial condition of a business, let us consider the reports made by Wallace Jones for the small grocery business of his father. Jones went to work in his father's store during the summer vacation. After working in the store for a few days, he asked his father how much the business was worth. The father

replied that he did not know exactly but that he was willing to help the boy find out. The two decided to take inventory, that is, to go through the stock of goods, list each item, and make an estimate of what each item cost. They found that the merchandise on hand had cost \$5,824. The land and building had cost \$4,000, and the counters and show-cases, \$250. The cash on hand and in the bank amounted to \$125. The business owed Simmons and Company a bill of \$627 for goods purchased.

The data relative to the financial condition of the business were arranged as follows:

Assets (What we own):

Cash	\$125.00	
Merchandise Inventory	5,824.00	
Furniture and Fixtures	250.00	
Land and Building	4,000.00	
Total assets		\$10,199.00

Liabilities (What we owe):

Simmons and Company	627.00
Proprietorship (What we are worth)	\$9,572.00

This statement illustrates a number of facts about this kind of accounting report. It lists the things which are owned, and subtracts from the total the amount owed to others. Anything which a business owns and which has a value in money is called an *asset*. Amounts owed to others are called *liabilities*. The excess of the assets over the liabilities is called the proprietorship, or *net worth*. A report showing assets, liabilities, and proprietorship is called a *balance sheet*.

The balance sheet is only one of a number of important accounting reports that are used in business. In this chapter, one other such report will be illustrated, the statement of income and expense.

Accounting reports are used to show the sources of income and the kinds of expense of a business.—Wallace Jones wished to know not merely what was the condition of his father's business at one time but also how much of the profits from sales went to pay the operating expenses of the store, and how much income was made each month. He decided that if he determined how much money the store received from the sales, and subtracted from the total sales, the cost of the goods sold and the expenses incurred in making the sales, the remainder would be the profit derived from the sales. The most difficult task was to find what was the cost of the goods sold. Jones solved this difficulty by keeping a record of the goods purchased during the month. By adding to the value of the goods on hand at the beginning of the month, the value of the goods purchased, he determined the total value of the goods which would have been on hand at the end of the month if none had been sold. He could find the value of the goods actually on hand at the end of the month by taking a count of the items and placing a value on each one. By comparing the value of the goods actually on hand with the value which would have been on hand if none had been sold, he computed the value of the goods sold. At the end of the month, the facts relative to the income and expense of the store for the month were arranged as follows:

Sales		\$5,500.00
<i>Cost of goods sold:</i>		
Goods on hand at the beginning of the month	\$5,824.00	
Goods purchased during the month	1,250.00	
Goods which would have been on hand if none had been sold	7,074.00	
Goods actually on hand at end of month	2,100.00	
Cost of goods sold		4,974.00
Gross profit		526.00

Expenses:

Delivery expenses	100.00	
Clerk hire	150.00	
Miscellaneous	15.00	
Total expenses		265.00
Net profit		\$261.00

This report, which shows the sources of income and the expenses for a definite period of time, is an illustration of a common business report. It is called a *Statement of Income and Expense*. It differs from a balance sheet in that the balance sheet shows the condition of the business at any one moment of time, while the statement of income and expense shows the results of operations over a period of time. The balance sheet and the statement of income and expense are the two most important of the accounting reports.

Accounting reports are based upon records.—In order that Wallace Jones might prepare the reports just illustrated, it was necessary that records be kept. In preparing the balance sheet, Wallace had to refer to the records of cash in the bank, to the records of the cost of merchandise purchased which showed the cost of each item of goods on hand, and to other records showing the cost of the land and building and of other assets of the business. Likewise, to prepare the statement of income and expense, he had to keep records of sales, purchases, and expenses. An accounting system is not complete unless it provides for the recording, tabulation, and summarizing of the operations of the business, the recording and tabulating being made in books called *accounting records*, and the summary being made in the form of accounting reports similar to those illustrated in this chapter. If adequate records are kept, the reports may be prepared directly from the records.

The reports which Wallace Jones and his father prepared showing the condition of the business on a certain date and the profits made by the business for the month were of great interest to Mr. Jones as the owner of the business, and they were found to be of value to him in establishing his credit with the bank and with concerns from which he bought merchandise.

QUESTIONS FOR DISCUSSION

1. What use might be made of accounting by a housewife; a boy away at college; a grocer?

2. What kind of records did Wallace Jones keep from which to prepare reports? What reports did he make?

3. Of what value to the class were the records kept by Wallace Jones?

4. What kind of information is shown in the balance sheet?

5. What use could Mr. Jones make of the balance sheet of his business?

6. What kind of information is shown in the statement of income and expense?

7. What use could Mr. Jones make of a statement of income and expense for his business?

8. The water company of St. Louis is owned by the city and is not operated for private profit. Is it necessary for it to keep records? If so, why? What are some of the records that you think would be useful?

9. Mr. Conrad wishes to sell you his grocery business. If you considered buying it, how would you determine the success with which he had operated his business during the past year?

10. R. B. Cole owns restaurants in Chicago, Detroit, and Buffalo. Mr. Cole lives in Toledo and is unable to go from city to city to look out for his interests. Is there any way in which he can judge the success of each restaurant?

CHAPTER II

THE NEED FOR ACCOUNTING IN BUSINESS

PURPOSES OF THIS CHAPTER

1. To show what business men make use of accounting reports
 2. To show some of the more important uses of accounting reports
-

In the present chapter we consider further the uses that may be made of accounting reports by each of various classes of people who may be interested in them. The reports which will be studied in this chapter are principally the balance sheet and the statement of income and expense. Some reference will be made to other types of business reports, however. As there are several important types of business organization it will be well to consider the value of reports for each separately. We shall begin with the single proprietorship, and follow with the partnership, and the corporation. In connection with the discussion of the corporation, the greater need for accounting in businesses of large size will also be considered.

Accounting reports of the single proprietorship are of value to the owner of the business, to creditors, and to prospective creditors.—The value of accounting reports to the business of a single proprietor has already been illustrated in Chapter I. The statement of assets and liabilities showed Mr. Jones, the owner of the business, what the financial condition of his business was at the date of the report. The statement of income and expense showed him

how much profit the business was making and also gave him other information about the volume of sales in dollars and cents, and the amounts of the expenses. These reports were found to be of interest to other people also. When Mr. Jones wished to buy merchandise, he found it much easier to establish his credit with wholesalers and manufacturers if he presented the two statements as illustrated, for they showed that the business was in satisfactory financial condition and that it was making profits. The bank was also interested in the statements, for although Mr. Jones was not borrowing from the bank at the time the balance sheet was made out, he occasionally did borrow from the bank, and he found it much easier to get the loan he desired when these statements were submitted to the banker. In addition to showing that the business was in good condition, the statements indicated that Mr. Jones was keeping himself properly informed about the business.

Accounting reports of a partnership are of value to the partners and to creditors and prospective creditors.—Frequent reports showing the financial condition of the business are even more necessary for the partnership than for the single proprietorship, because more people are financially interested in the business. In addition to the other businesses from which merchandise is purchased and the bank from which funds may be borrowed, there are two or more owners of the business, the partners, who must know what is the interest of each in the business, the share of the profits to which each partner is entitled, the amount of money or merchandise which each partner has withdrawn, and the amount of profits which each has left in the business. Additional investments may be made by the partners from time to time, and some partners may find it necessary or advisable to withdraw a part of their invest-

ment. Such facts as these must be clearly shown in the accounting reports which are rendered at regular intervals. Thus, accounting reports are made more necessary because of the greater number of owners who are interested in knowing the financial condition of the business.

Another fact which makes accounting reports more necessary for the partnership is that often each partner is carrying on some special part of the management of the business, and the other partners must know what is being done. When one individual looks after all the phases of management, such as the buying, the selling, the keeping of accounts, the making of collections, and the paying of the bills, as is the case in the single proprietorship, he may be able to remember a great deal about each of these things; but, in a partnership, where each partner cannot at all times know what other partners are doing in the parts of the business placed under their management, regular reports, which keep all the partners informed about the business as a whole, become very important. Thus the increased size of the business and the greater number of persons concerned with the financial condition of the partnership mean that the financial reports assume greater importance.

The accounting reports of a corporation are of value to a great many persons.—A corporation has even more need for accounting than does a partnership, because the organization is more complicated, because as a rule the business is larger, and because in many cases a large percentage of the owners of the business do not take any active part in the management of the business. Where authority is delegated to others, some method of holding to account those persons to whom the authority has been delegated becomes necessary, for authority and responsibility are very closely related. The method by which individuals are held re-

sponsible for showing the proper results and the proper use of their authority is a system of financial reports. Two of these reports are the statement of assets and liabilities and the statement of income and expense, but as we shall see, many other reports are prepared even for a business of moderate size.

Some of the persons interested in the accounting reports of the corporation are the following:

1. Stockholders
2. Directors
3. President
4. General Manager
5. Department heads
6. Subordinates such as foremen
7. Creditors
8. Persons who are considering the purchase of the company's stock or bonds
9. Tax collectors

In the corporate form of business organization, the stockholders are the owners. They elect the directors to operate the business, and the directors determine the general policies of the business and select the president and other officers to carry out these policies. In a large corporation there may be a general manager, controlling a number of department heads who in turn control the foremen or other subordinates. The problem of checking the activities of each individual to determine whether he performs his duties faithfully is often a very difficult one. Thus, a system of accounting reports, showing whether the business is efficiently managed, becomes a necessity.

Just as in smaller and simpler businesses, so in corporate businesses, the most important reports are the statement of income and expense and the balance sheet. Business is

usually run for profit, and the success of the management is measured, first of all, by the profits which the business makes. The statement of income and expense makes it possible for the directors to determine in what respects the business is successful or unsuccessful. A comparison of the expenses of each department this year with expenses last year shows which departments have been most efficiently conducted, allowance being made for the difference in the work done this year as compared with last year.

The balance sheet, showing the assets, liabilities, and proprietorship of the company, gives the directors the information as to how the capital of the company has been invested, and helps them to decide such questions as whether to enlarge the plant, whether to accumulate funds to pay off outstanding bonds, whether to secure additional bank loans or to pay off loans already secured, and whether to pay dividends. The balance sheet is of value also to the stockholders because it shows the amount of assets their company owns and the amount of liabilities it owes. It therefore helps them to determine the value of their stock.

The directors of a corporation usually turn over the active management to the president and the other officers. Reports aid them in knowing whether the officers are carrying out the general policies which the directors have decided upon, and also whether the corporation is making the profits which they expect. Likewise, the president, who has under him the department heads, must receive reports showing what is being done in each department.

The departments most frequently found in business organization are the departments of marketing, production, purchasing, finance, and records and reports. Each of these departments is directed by a manager who is responsible to the president and who must render reports showing

what he has done and what he plans to do. Likewise, the heads of departments receive reports from their subordinates.

Accounting is of great value in the administration of the finances of a business.—Regardless of whether the business is organized as a single proprietorship, a partnership, or a corporation, accounting is a necessary aid to the business man in keeping informed with regard to the finances of his business. For example, the accounts show not merely the total sums due from customers, but also the amount due from each individual customer. Thus, the accounts assist the business man in making his collections. The accounts also show to whom money is owed, thus enabling the business to avoid paying the same bill twice. By a study of the accounting reports, the executive is enabled to know which expenses are out of line and to take steps to reduce those which appear to be too large. Likewise, the accounting reports give the business executive information as to the sources of his income, showing how much is received from the usual operations of his business, and how much from other sources such as interest. By indicating which branches of the business or which lines of merchandise are most profitable, accounting shows what parts of the business should receive the attention of the management.

Several branches of accounting have been developed to meet the needs of business.—The need for accounting in business may be observed from another point of view by considering the branches of accounting which have been developed, for each division of accounting has been developed to meet a definite need of business. It will be seen from the mere enumeration of the branches of accounting that the work covers a very wide field. The more important of these branches as practiced in private business are as follows:

1. *Financial accounting*, or the keeping of financial records of businesses, whether retail stores, manufacturing companies, banks, or other types of private business. The object of financial accounting is to show the financial condition of the business from time to time, to show the expenses and the income, and to aid in business administration in ways already indicated.

2. *System building*, or the designing of forms of records and reports and methods of gathering the information for the records and reports according to the needs of the individual business. Although the general principles of accounting are the same for all businesses, the exact accounting methods vary according to the type and size of the individual concern. Much of the work of preparing accounting systems is done by accounting firms or individual accountants, though manufacturers of bookkeeping machines also devise systems to be used with their machines.

3. *Cost accounting*, or the keeping of records showing the cost per unit of goods manufactured and sold. Cost accounting, in addition to showing the information given by financial accounting systems, and serving the purposes of financial accounting, distributes the expenses over the units of product and thus shows the total cost of each unit.

4. *Auditing*, or checking and verification of the accounting records kept under the financial or the cost accounting system. This is one of the largest branches of public accounting at the present time.

5. *Income tax accounting*, or the attempt to prepare correct statements of income and expense for purposes of assessment of income taxes to the government. In most respects, such a statement of income is similar to the statements usually prepared as a regular part of the financial accounting system, but there are important differences

which call for special study. The handling of tax cases before government boards also requires the talent of specialists in this field.

The need for accounting has greatly increased in recent years.—There are several reasons for the increased need for accounting. First, the size of the average business has greatly increased, this increase being especially marked during the period since 1900. The larger the business, the greater is the necessity for the president or general manager to delegate important tasks to others; and, as has already been pointed out, the delegation of authority requires that reports be rendered showing how the authority has been used to increase the profits of the business. Increased size also means that the executives have greater difficulty in supervising personally the work delegated to them and in keeping in mind the detailed facts of the business operations. The larger and the more complex the organization, the greater the need for accounting records and reports.

Second, in many lines of business, competition has increased. This increase in competition has resulted in decreased profits, and the narrowing of the margin between cost and selling price has made necessary more careful control over expenses. Accounting reports are needed to show just what each kind of expense amounts to, and at what points expenses may be cut without unduly affecting income, or, in some cases, at what places expenses may be profitably increased in order to bring a more than proportionate increase in income.

Third, industry has come to depend upon commercial banks and investment houses in securing much of its capital, and these institutions demand accounting reports showing the financial condition of the business and the profits the business has made in past years. If the business, when

applying to banks and bond houses for capital, can also present detailed plans for the future, it is more likely to secure the capital it asks for. Such plans cannot be made unless adequate information concerning past results is provided by accounting records.

Finally, governmental control of business has greatly increased, and this control has made additional reports necessary. This fact may be illustrated by the federal income tax which requires that businesses keep adequate accounting records in order that they may determine the amount of their taxable income. The income tax has caused many businesses to keep more detailed accounting records than they formerly considered necessary. All of these forces which have increased the need for accounting are still at work, and accounting will continue to hold a position of increasing importance in the future.

QUESTIONS FOR DISCUSSION

1. Give examples, in your own town or city, of businesses which are single proprietorships; partnerships; corporations.
2. What persons concerned with an individual proprietorship are aided by the balance sheet, and the statement of income and expense of the business? Illustrate.
3. What persons are aided by the financial statements of a partnership?
4. What persons are aided by the financial statements of a corporation?
5. In what way does the bank's monthly statement help a family in the management or control of its affairs?
6. What are some of the duties of an accountant? Of a bookkeeper? Of an auditor? Is it true that the duties of the three might overlap?
7. C. O. Milton owns a retail grocery store. Who, other than Mr. Milton, might want information respecting his business?
8. The Elevated Railway Company of Chicago decides to cut the wages of its employees ten cents per hour. The men say that they will strike rather than accept the cut. The company alleges that it cannot

pay the old rate. How could you, as an arbitrator, use accounting to help determine whether or not the company is in a position to pay the old rate?

REFERENCES FOR FURTHER STUDY

IMPORTANCE OF ACCOUNTING IN BUSINESS: Woodbridge, *Elements of Accounting*, pp. 1-10

THE PROVINCE OF ACCOUNTING: White, *Business Management, an Introduction to Business*, pp. 359-386

THE NATURE OF BUSINESS MANAGEMENT: Folts and Stillman, *Interpretive Accounting*, pp. 4-11

THE BUSINESS MAN'S TASK OF COMMUNICATION AND JOBS IN COMMUNICATION: Lyon, *Making a Living*, pp. 286-310

PART II

THE MOST IMPORTANT ACCOUNTING REPORTS
AND THE INFORMATION WHICH
THEY CONTAIN

CHAPTER III

THE BALANCE SHEET; ITS PRINCIPAL DIVISIONS

PURPOSES OF THIS CHAPTER

1. To explain the report called the Balance Sheet and show what information it contains
 2. To show how the information presented in the Balance Sheet is arranged
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Of the reports which serve in the several uses of accounting discussed in the preceding chapter, two are of outstanding importance. They are the balance sheet and the statement of income and expense. In this part of our study we shall examine these reports more carefully with a view to seeing just what information is contained in each.

The balance sheet contains three important divisions.—The balance sheet is a detailed statement of assets, liabilities, and proprietorship. This report shows for any one date or any one moment of time the value of the property owned, the amount of debts owed, and the value of the investment of the owners in the business. These three divisions may be arranged in a number of ways which will be illustrated later, but all balance sheets of going businesses are alike in that they contain all three divisions. Of course, if a business is just being organized, it may not have any liabilities; while if a business has failed, the investment of the owners may be a negative quantity.

Assets are things owned which have a money value.—

The assets of a small mercantile business were listed in the balance sheet shown in Chapter I. For such a business, the assets include the merchandise to be offered for sale, the counters and showcases, the land and building, cash on hand and in the bank, the accounts due from customers for merchandise sold to them, the delivery trucks, and anything else having a money value. In a manufacturing concern, the assets would include, in addition to those named for the mercantile concern, machinery, raw materials, patents, copyrights, and trademarks. If any expenses have been paid in advance, such as interest on bank loans or premiums on insurance, these also are included as assets for the proportion of the amount paid which has not yet been used up.

Technical accounting terms are used to designate asset values on the balance sheet.—All sciences have found it necessary to develop technical terms. So in accounting some of the terms used have meanings which differ slightly from what might be considered general usage. Also some terms in general use are not used in accounting. The meaning of the terms commonly used in accounting to designate asset values will now be explained.

Cash. In accounting, money on hand or in the bank is always designated as cash. The word "money" is never found on a balance sheet. "Cash" includes not merely coins of gold, silver, nickel, and copper, but also paper money of all kinds, money orders, checks, and drafts. Anything which would be accepted for deposit at the bank is considered as cash. I.O.U.'s or other promises to pay, or receipts, are not considered as cash.

Accounts Receivable.—Included under the heading of Accounts Receivable on the balance sheet are all debts due from customers for merchandise purchased for which

the customer has not given a written promise to pay. In other words, accounts receivable means debts of customers not represented by notes but carried on open account. The promise of the customer whose debt is carried as an account receivable may be an oral promise or it may be merely an implied promise. It is presumed that a customer will pay for his purchases even though he makes no oral or written promise to do so. If Mr. Adams stops at the meat market for a pound of steak, he may say nothing about payment, because the proprietor keeps an open account with him. The proprietor lists the value of the steak under Adams' name, as an Account Receivable and sends a bill at the end of the month. Mr. Adams could be compelled to pay his bill just as certainly as if he had given a promise to meet his obligation.

It should be emphasized that the words "Accounts Receivable" on the balance sheet mean sums due on open account from customers for merchandise purchased, and nothing else. It does not include sums due from employees because of advances in wages to them, or sums due from officers because of salary advances. Neither would it include an I.O.U. for money borrowed. This fact is very important because officers of the company and prospective creditors frequently compare the amount of the Accounts Receivable with the sales or some other items on the financial statements, and if the Accounts Receivable have been increased by the improper inclusion of other items, the comparisons give misleading results.

Notes Receivable.—Notes Receivable include written promises of customers to pay for merchandise purchased. Notes are often given by customers when merchandise is purchased, though frequently a customer makes a purchase on open account and then gives a note when the account

comes due. This gives the customer a longer time in which to pay but requires him to pay interest. The Notes Receivable should be set forth separately on the balance sheet and not included with Accounts Receivable. The reason for showing notes separately is that an increase of Notes Receivable may be an indication that customers are taking a longer time to pay, and this fact may throw an important light upon the financial condition of the business.

Merchandise Inventory.—Merchandise Inventory includes all goods which at the date of the balance sheet are owned by the business and are intended for resale. It includes goods which have been shipped to the company even though those goods have not been received and checked in, provided the title to the goods has passed to the purchaser. It does not include supplies of wrapping paper, twine, paper bags, or other supplies not intended for sale. These items are listed on the balance sheet under a separate heading and are called supplies.

Prepaid Expenses.—Usually fire insurance and other kinds of insurance are paid a year or more in advance. If a business pays a fire insurance premium of \$60 for one year's protection beginning July 1, only one-half of this premium can be considered an expense of the current calendar year. When the firm makes its balance sheet on December 31, it must consider that it has an asset consisting of prepaid insurance to the amount of \$30. Other expenses such as rent, which are paid in advance, are treated in the same way. This asset is sometimes called *deferred charges*.

Supplies.—Supplies are those things which are to be used in the regular operations of the business but which are not sold. Under this heading come wrapping paper, bags, twine, pencils, stationery, cleaning supplies, gasoline and oil for delivery trucks, feed for horses, and coal and wood for heating.

Furniture and Fixtures.—The term “furniture and fixtures” is applied to that equipment other than building and supplies which is used in carrying on the business. Furniture and fixtures are not for sale in the course of business. In a meat market, for example, furniture and fixtures include the counters, display cases, cutting blocks, ice box, cash register, knives, saws, and cleavers.

Delivery Equipment.—Under the heading of delivery equipment are included horses, wagons, bicycles, trucks, baskets, boxes, and whatever else is used in making deliveries.

Buildings.—Buildings and land are sometimes listed together on the balance sheet under the heading of real estate, but this is not good practice because the person who reads the balance sheet cannot determine the value of each. Of even more importance is the fact that the building eventually will wear out and its value will gradually become less, whereas the land does not wear out and its value may even increase.

Land.—The item “land” on the balance sheet shows the cost of the land as distinguished from the value of the buildings on it. The value placed upon the land is usually the cost of the land to the business, and not the market value of the land.

Advances.—This item consists of salaries paid in advance, loans to officers, or employees, and sometimes loans to subsidiary companies controlled by the business.

Intangible Assets.—In addition to the assets already mentioned, there is a miscellaneous group of assets frequently shown as one item on the balance sheet under the heading of ‘Intangibles.’ This group includes franchises, patents, copyrights, trademarks, and goodwill. By franchises we mean special privileges granted by municipal or governmental authority, such as the right of a telephone

company to set poles on the public highway. If franchises are carried as assets they should be valued at the cost of securing them. Likewise copyrights and patents are properly valued at cost. Goodwill is a somewhat vague term which is used to describe the excess value of a going concern above the cost of its assets valued separately. It includes the anticipated returns from past advertising expenditures, and the estimated value of trade connections, of the goodwill of employees and of the public, and the many other advantages which an established and successful business would have over a new competitor whose tangible assets are equivalent to its own.

The best accounting practice is to omit goodwill entirely from the balance sheet, or to value it at no more than the amount actually expended in building up the business. Not infrequently, however, it is, in practice, valued at much higher figures, especially when it is desired to issue stock at a valuation higher than the cost of the assets.

Assets are grouped into classes.—On the balance sheet, the assets are often grouped into classes and the total of each class of assets shown. *Total Assets* is the sum of these class totals. The more important classes are current assets, fixed assets, and prepaid expenses. Some balance sheets have, as additional classes, investments and intangible assets. The current assets include cash and those assets which will be turned into cash within a short time in the ordinary course of the business. The period of time which is required for turning the current assets into cash is usually considered to be one year or less. The principal assets which are included under the heading of current assets are Cash, Notes Receivable, Accounts Receivable, and Merchandise Inventory. The process of turning these assets into cash, in the ordinary course of the business, may be

illustrated by reference to a mercantile business. The usual procedure in such a business is first, the purchase of the merchandise; second, the conversion of the merchandise into an account receivable by means of a sale; third, the collection of the account receivable in cash or the acceptance of a note from the customer; and fourth, if a note was given, the collection of the note in cash. The cash is then converted into more merchandise and the process is repeated.

Fixed assets include the assets to be retained permanently in the business, such as land, buildings, delivery equipment, and furniture and fixtures. Prepaid expenses, sometimes called deferred charges, include the value of advance payments for services for which the business has not yet received the benefit. The more common of these are prepaid insurance, prepaid interest, and supplies. The reason for the inclusion of supplies in this class is that when the supplies are used, no cash or account receivable will be received by the business, but the value of the supplies used will enter into the statement of income and expense as an item of expense.

The investments of a business may include any kind of stocks or bonds. Frequently also businesses hold land and buildings other than those used in the business for purposes of investment. Sometimes a business accumulates funds for the purpose of paying off a bond issue or making an addition to a building. Until these funds are needed for the purpose for which they are intended, they may be invested in bonds or stocks. Such assets should be classed on the balance sheet as investments.

Intangible assets include the franchises, trademarks, copyrights, patents, and any valuation placed on goodwill. Frequently the assets here classed as intangibles are considered as fixed assets and are so shown on the balance sheet.

It should not be thought that all of these assets or even all of these groups of assets will be found on every balance sheet. On the contrary, many businesses have no investments outside the assets used in the business itself, and many businesses do not care to place any money value on their intangible assets even though these assets may represent an expenditure of funds. These facts must be kept in mind in studying the list of assets given below. This list shows the five groups of assets in the order in which they might appear on the balance sheet. In later illustrations of the balance sheet, only the more usual groups of assets will be shown. When the balance sheet contains only a few items, it is not always necessary to classify the assets.

CLASSIFICATION OF ASSETS

Current Assets

- Cash
- Notes Receivable from Customers
- Accounts Receivable
- Merchandise Inventory

Prepaid Expenses

- Prepaid Insurance
- Prepaid Interest
- Supplies

Investments

- Liberty Bonds
- Land

Fixed Assets

- Furniture and Fixtures
- Delivery Equipment
- Building
- Land

Intangible Assets

- Franchises
- Patents
- Trademarks
- Copyrights
- Goodwill

Liabilities are debts owed by the business.—The liabilities of businesses arise in connection with the purchase of goods, the borrowing of money from the bank through the giving of promissory notes, the borrowing of money on the security of a mortgage on the land and building owned by the business, and the receiving of services from employees who are not paid for their services immediately. Liabilities may arise in other business transactions also, and every business will have some liabilities at all times.

Technical accounting terms are used to denote liability items on the balance sheet.—The more important of the liabilities are as follows:

Accounts Payable.—This item consists of sums due to trade creditors on open account for merchandise purchased, supplies, or fixed assets. Items which are sometimes improperly included as accounts payable are sums due employees for salaries, or wages due but not paid, or sums due the government for taxes. These liabilities should be shown under separate headings under the titles Wages Accrued and Taxes Accrued.

An account payable of one company is an account receivable of the company to whom the debt is owed. Suppose, for example, that a student agrees to sell *The Saturday Evening Post*, promising to make payment for the magazines at the end of the week. On the balance sheet of the student, the amount due to the publishers would be listed as an account payable, while on the balance sheet of the publishing company, it would be shown as an account receivable.

Notes Payable.—Notes payable are the proprietor's written promises to pay a certain sum of money at a certain time. Notes payable may arise from the borrowing of money from banks, or notes may be given to trade creditors for goods purchased. Frequently the two kinds of notes

are shown separately on the balance sheet, the first being shown as Notes Payable to Banks, and the second as Notes Payable to Trade Creditors.

Mortgage Notes Payable.—A mortgage note payable is a liability secured by a mortgage or a lien upon property such as building or land. Such notes are usually issued to run for a number of years. Mortgage notes payable are found on the balance sheets of small businesses. Large corporations borrow larger sums than a single investor can supply. If a single mortgage note is issued, only one investor can hold the mortgage, and it is very inconvenient to issue a number of mortgages on the same piece of property. This difficulty is overcome by the corporation through the issuance of mortgage bonds. A single mortgage is executed in favor of a trustee, the individual investors receiving bonds of varying denomination which share proportionately in the protection of the mortgage. Thus on the corporation balance sheet, Mortgage Payable does not appear, but in its place is usually the item Bonds Payable. Bonds are also issued without mortgage security. These differ from notes payable only in that they are of longer maturity, and are so drawn that they can be transferred freely from hand to hand without indorsement.

Liabilities are grouped into classes.—The number of classes of liabilities is usually not as great as the number of classes of assets. There are usually only two classes of liabilities, current liabilities and fixed liabilities. The current liabilities are those which must be paid within a relatively short time, say one year, while the fixed liabilities are those running for a longer time. Certain liabilities, such as accounts payable, are always classed as current, while certain others are always classed as fixed. A classification of liabilities is as follows.

CLASSIFICATION OF LIABILITIES

Current Liabilities

Accounts Payable for Merchandise Purchased
 Notes Payable
 Salaries and Wages Accrued
 Taxes Accrued

Fixed Liabilities

Mortgage Payable
 Notes (over one year's maturity)

The excess of assets over liabilities is called **net worth or proprietorship**.—It is sometimes said that net worth or proprietorship is the difference between assets and liabilities. It would be more accurate if one said that it is the excess of assets over liabilities. In everyday language the expression *net worth* is used in such questions as: "How much is Mr. Mills worth?" How much Mr. Mills is worth may be determined by subtracting his liabilities from his assets.

If we wish to express this accounting relationship of the principal divisions of the balance sheet in the form of an equation such as is used in algebra, we write it thus:

$$\text{Assets} - \text{Liabilities} = \text{Proprietorship}$$

This would be shown as follows:

Assets	\$10,000	
Liabilities	6,000	
Proprietorship		\$4,000

If we wish, we can transpose this equation in the same way that we do in algebra and set up the statement in a slightly different form:

$$\text{Assets} = \text{Liabilities} + \text{Proprietorship}$$

Now the arrangement is as follows:

Assets	\$10,000	Liabilities	\$6,000
		Proprietorship	4,000
	<u>\$10,000</u>		<u>\$10,000</u>

The net worth of a single proprietorship is shown as one item in the balance sheet.—A single proprietorship, as was indicated in the preceding chapter, is a business owned entirely by one individual. This does not mean that one individual furnishes all of the money for the undertaking, since some of the funds needed in the business may be borrowed and additional assets may be obtained by purchasing goods on credit; but in the single proprietorship, there is only one owner, and title to the business rests in one individual. This form of business organization is suited to a business of relatively small size for which one individual, by his own investments and by borrowing, can supply all of the capital needed. The business should also be simple enough in its organization that one individual can efficiently supervise all phases of it. A business to be conducted as a single proprietorship can be formed by any one at any time, provided the purpose is not illegal and provided local regulations such as taxes and licenses are complied with. The net worth of a single proprietorship may represent cash or other assets which the owner paid into the business when the business was organized, or it may represent the original investment plus any profits which have been left in the business or minus any losses.

The method of showing net worth in a single proprietorship is illustrated by the balance sheet of the automobile business of James Conrad given on the opposite page.

THE BALANCE SHEET

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JAMES CONRAD

BALANCE SHEET, DECEMBER 31, 1928

<i>Assets</i>		
Cash	\$50	
Accounts Receivable	450	
Furniture and Fixtures	100	
Tools	300	
Automobiles	1,900	
Total Assets		\$2,800
<i>Liabilities</i>		
Notes Payable to Bank	\$200	
Accounts Payable	950	
Total Liabilities		1,150
<i>Proprietorship</i>		
James Conrad, Capital		\$1,650

It should be noted that in this balance sheet only the assets and liabilities of the repair business are included; any other investments or personal debts are omitted. While the balance sheet of a single proprietorship thus shows the financial condition of the business, it does not show the total amount of property belonging to the proprietor. Neither does it show the total property which would be available to satisfy the claims of the creditors in case the owner should become bankrupt, since other assets might be seized by them in case of bankruptcy. The financial statements of the single proprietorship are therefore not as significant as are the financial statements of the corporation. The partnership resembles the single proprietorship in this respect.

The net worth of a partnership is shown by one item for each partner.—Let us assume that at the close of the year 1928, Conrad decides to take in a partner. The business is

growing and Conrad feels that the business could profitably use more capital. He reaches an agreement with Frank Noble whereby the two are to combine their money, property, skill, and labor, to carry on the repair business. They decide that each will supply money or property to the amount of \$2,000. This means that, since Conrad already has \$1,650 invested, he must pay in an additional \$350, while Noble pays in \$2,000. After the partners make these additional investments, the balance sheet of the partnership is as follows:

CONRAD AND NOBLE

BALANCE SHEET, DECEMBER 31, 1928

<i>Assets</i>		
Cash	\$2,400	
Accounts Receivable	450	
Furniture and Fixtures	100	
Tools	300	
Automobiles	1,900	
Total Assets		\$5,150
<i>Liabilities</i>		
Notes Payable to Bank	\$200	
Accounts Payable	950	
Total Liabilities		1,150
<i>Proprietorship</i>		
James Conrad, Capital	\$2,000	
Frank Noble, Capital	2,000	
Total Proprietorship		\$4,000

If the partners withdrew equal amounts of cash and merchandise from the business each month, the interest of each partner in the business could always be determined by finding the total proprietorship and dividing by two, since the original investments of the partners were equal and

the profits and losses are shared equally unless otherwise agreed by the partners.

At the close of the first year, the balance sheet of Conrad and Noble was as follows:

CONRAD AND NOBLE		
BALANCE SHEET, DECEMBER 31, 1929		
<i>Assets</i>		
Cash	\$820	
Accounts Receivable	1,350	
Furniture and Fixtures	480	
Tools	530	
Automobiles	3,700	
Total Assets		\$6,880
<i>Liabilities</i>		
Notes Payable to Bank	\$1,000	
Accounts Payable	800	
Total Liabilities		1,800
<i>Proprietorship</i>		
James Conrad, Capital	\$2,540	
Frank Noble, Capital	2,540	
Total Proprietorship		<u>\$5,080</u>

Proprietorship in a corporation is shown by a number of items.—To illustrate the method of showing the proprietorship of a corporation, let us assume that at the end of the first year of the partnership, Conrad and Noble agreed to terminate the partnership and form a corporation. They went among their friends and acquaintances and asked them to subscribe for stock in the corporation. The shares of stock offered, which were evidences of part ownership in the corporation, had a par value of \$100 each, though this is not always the case. After obtaining the subscriptions for the stock and after obtaining a charter from the Secretary

of State, Conrad and Noble then called upon the subscribers to pay the amounts they had pledged. The payments were made, the stock certificates were issued, and the subscribers to the stock became stockholders.

The form and arrangement of the balance sheet of the corporation formed by Conrad and Noble is exactly like that of the partnership except for the method of showing proprietorship. Since the stockholders of the corporation are the owners, the investment of the stockholders is shown under the heading of proprietorship. The total par value of the stock outstanding is shown under the title Capital Stock. As profits are accumulated the proprietorship of the corporation comes to exceed the total par value of the stock outstanding. The excess of proprietorship above the par value of the stock outstanding is called Surplus. Sometimes, a part of this excess is shown as Appropriated Surplus when it has been appropriated for plant extension, for the payment of bonds, or for some similar purpose and is not to be used in making dividend payments to stockholders. Of course, there was no surplus at the date of the formation of the corporation which took over the business of Conrad and Noble, since the stock was issued at par or \$100 per share. Sometimes stock is sold at a price above par, which gives rise to Paid-in-Surplus. Stock may be sold for less than par, which gives rise to Discount on Stock. This item represents a deduction from net worth. In a newly-organized corporation, net worth may be equal to the par value of the capital stock outstanding, but it is never equal to the par value in a company which has been in operation for any time. The balance sheet of the Acme Company, which was formed by Conrad and Noble, shows the financial condition of the business six months after its incorporation.

THE BALANCE SHEET

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THE ACME COMPANY

BALANCE SHEET, JUNE 30, 1930

<i>Assets</i>		
Cash	\$1,200	
Accounts Receivable	16,800	
Merchandise	10,300	
Furniture and Fixtures	1,620	
Delivery Equipment	1,470	
Buildings	10,000	
Land	2,000	
Total Assets		\$43,390
<i>Liabilities</i>		
Accounts Payable	18,760	
Mortgage on Land and Buildings	2,000	
Total Liabilities		\$20,760
<i>Proprietorship</i>		
Represented by:		
Capital Stock	20,000	
Surplus	2,630	
Total Proprietorship		<u>\$22,630</u>

The balance sheet may be arranged in report form or in account form.—All of the balance sheets which have been given in this chapter are arranged in report form. In this form the assets are listed first, with the liabilities listed next, and the total liabilities deducted from the total assets to obtain the amount of the proprietorship. The headings Assets, Liabilities, and Proprietorship are placed in the middle of the page and underscored. These classifications stand out in a prominent manner in any balance sheet because they are the important divisions. In any form of balance sheet also it is usually desirable to show the subdivisions of the assets and the liabilities, such as current

and fixed assets and current and fixed liabilities. To illustrate the difference between the two forms, the balance sheet of Charles Young is shown in both report form and account form. The report form is as follows:

CHARLES YOUNG

BALANCE SHEET, JUNE 30, 1930

<i>Assets</i>		
<i>Current Assets</i>		
Cash	\$1,600	
Accounts Receivable	1,000	
Merchandise on hand	4,500	
Total Current Assets		\$7,100
<i>Fixed Assets</i>		
Furniture and Fixtures	600	
Delivery Equipment	400	
Land and Building	2,000	
Total Fixed Assets		3,000
Total Assets		\$10,100
<i>Liabilities</i>		
<i>Current Liabilities</i>		
Accounts Payable	1,500	
Notes Payable to Bank	1,000	
Total Current Liabilities		2,500
<i>Fixed Liabilities</i>		
Mortgage Note Payable	2,000	
Total Liabilities		4,500
<i>Proprietorship</i>		
Charles Young, Capital		\$5,600

In the account form of balance sheet, the assets are listed on one side of the page and the liabilities and the proprietorship are listed on the other side of the same page on a level with the assets. The balance sheet of Charles Young when arranged in the account form appears on the opposite page.

THE BALANCE SHEET

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CHARLES YOUNG

BALANCE SHEET, JUNE 30, 1930.

<i>Assets</i>		<i>Liabilities</i>	
<i>Current Assets</i>		<i>Current Liabilities</i>	
Cash	\$1,600	Accounts Payable	\$1,500
Accounts Receivable	1,000	Notes Payable to Bank	1,000
Merchandise on hand	4,500		
Total Current Assets	\$7,100	Total Current Liabilities	\$2,500
<i>Fixed Assets</i>		<i>Fixed Liabilities</i>	
Furniture and Fixtures	600	Mortgage Note Payable	2,000
Delivery Equipment	400		
Land and Building	2,000	Total Liabilities	4,500
Total Fixed Assets	3,000	<i>Proprietorship</i>	
		Charles Young, Capital	5,600
Total Assets,	\$10,100	Total Liabilities and Proprietorship	\$10,100

The account form permits of slightly easier verification of the totals since the proprietorship is added to the total of the liabilities to obtain a figure which is equal to the total assets, whereas in the report form the total liabilities are subtracted from the total assets to obtain the amount of the proprietorship. The account form also places the assets opposite the liabilities and the proprietorship, which makes it somewhat easier to compare the various items and sub-totals of the one group with items and subtotals of the other groups. For example, in the above balance sheet, one might wish to compare the total current assets with the total current liabilities, or the fixed assets with the fixed liabilities, or the cash with the current liabilities. Such comparisons are perhaps easier in the account form of balance sheet than in the report form. It should be noted, however, that the report form shows the net worth more prominently than does the account form. The report form is more satisfactory when the balance sheets for several years are to be compared.

In the balance sheets illustrated in this chapter, the assets are listed in the order of their probable liquidity. That is to say, cash is listed first, and the other assets are listed in the order in which they will be turned into cash. The accounts of customers presumably will be collected before the merchandise is converted into cash, though, of course, if cash sales are made, the merchandise may be turned into cash before the accounts are collected. The fixed assets are also listed in the order of their service life, the assets of shortest life being listed first because the business will recover their values first. In the same way, on the liability side, the liabilities which will be paid first are listed first. The proprietorship, which will not be retired as long as the business continues to operate, is listed last.

While the order followed in listing the items on the balance sheets given in this chapter is satisfactory and is frequently used, it is not universally followed. Frequently, the assets of longest life are listed first and cash is placed last among the assets. The fixed liabilities also are frequently placed first among the liabilities. Which form is used does not make any material difference, but the same form should be followed year after year in any business in order that the financial condition in one year may be compared with the financial condition in other years. In businesses where the fixed assets are more important than the current assets, it is customary to list the fixed assets first in the balance sheet. If the fixed assets are listed first, the fixed liabilities should also be listed first.

QUESTIONS FOR DISCUSSION

1. Define or explain:

- a.* Cash
- b.* Accounts Receivable
- c.* Notes Receivable
- d.* Merchandise Inventory
- e.* Prepaid Expense
- f.* Furniture and Fixtures
- g.* Delivery Equipment
- h.* Intangible Assets
- i.* Accounts Payable
- j.* Notes Payable
- k.* Mortgage Notes Payable

2. Explain:

- a.* The report form of balance sheet
- b.* The account form of balance sheet

3. Can you think of any purposes for which one form of balance sheet might have an advantage over the other? Is it merely a difference in arrangement, or is the one better than the other, say for comparative purposes?

4. What advantages do you see in the classification of assets and liabilities for balance sheet purposes?

5. Give reasons why Accounts Receivable and Notes Receivable should be listed separately on the balance sheet.

6. Define and illustrate current and fixed assets; current and fixed liabilities.

7. The Smith Company is engaged in the retail dry goods business. It owns its furniture and equipment but rents its store. The National Harvester Company manufactures agricultural equipment. It owns its factory, machinery, and equipment. What are some of the ways in which the balance sheets of the two companies may differ?

8. Sullivan is working in the Farmers' and Ranchers' Bank of Lewistown, a progressive town of 40,000 people. Mr. Carlson, a rancher, asks for a loan of \$5,000 from the bank. Sullivan is told to "find out" about Mr. Carlson. What should he do?

9. In the same town, the Columbia Machine Company is engaged in making tractors. As a banker, contemplating lending the company money, what information would you want, and how would you secure it in this case?

10. Assume that the Columbia Company has just been organized. Would you get your information from a source different from that given in your answer to question 9?

11. L. R. Hill submits this balance sheet to a bank:

Current assets	\$20,000	Current liabilities	\$12,000
Fixed assets	15,000	Proprietorship	23,000
	\$35,000		\$35,000

The bank is not satisfied with this report and suggests that you advise Mr. Hill how to construct his balance sheet. What suggestions would you offer?

12. "There is no occasion for my making up a balance sheet. I know what I own and what I owe." What criticism would you make of this statement?

PROBLEMS

1. On June 1, 1930, William Abernathy has the following property: Cash, \$1,675; Merchandise, \$16,876; Furniture and Fixtures, \$1,280;

Delivery Equipment, \$749. The following owe him: John Jones, \$150; Earl Peterson, \$50; A. B. Palmer, \$80; Marshall Brothers, \$1,480; J. F. Hughes, \$820. Abernathy owes McMurray Brothers \$4,870; Stevens and Company, \$840; Talbot and Company, \$20. What is William Abernathy's proprietorship?

2. On January 1, 1929, Milton Preston invests \$6,000 in the retail grocery business. On December 31, 1929, his assets and liabilities are as follows:

Cash	\$720
Furniture and Fixtures	640
Accounts Receivable	1,420
Delivery Equipment	400
Building and Land	1,500
Merchandise	3,680
Accounts Payable	2,490

Make a statement showing Preston's proprietorship at the end of the year 1929. Compare with the proprietorship at the beginning of the year.

3. James Wise is a student at the University. From the following information, make a statement showing his financial condition. He owns a runabout valued at \$760; furniture in his room, \$125; clothing, \$110; books, \$40; golf clubs, \$15; tennis racket, \$5; and camera, \$5. He owes \$12 for repairs on his auto; \$10 garage rent; \$7 for cleaning and pressing, and \$10 to his roommate. His room rent is paid 15 days in advance, at \$20 a month.

4. A. K. Long, a retail merchant by whom you are employed, asks you to make out a balance sheet from the following information:

Merchandise on hand	\$1,400
Due to J. F. Sherwood	400
Office Equipment	700
Due from R. Hudson	250
Due from S. A. Watson	75
Due from Clinton Miller	62
Due from Otis Herts	55
Cash	780
Due to George King	300
Delivery Equipment	280
Due from O. T. Baldwin	118

5. A. Cline and D. Cline, a law firm, have the following assets and liabilities:

Cash	\$300
Due to Acme Stationery Company	25
Office furniture	700
Due from Davis Brothers	220
Stationery and supplies	100
Due from Becker Company	280
Professional books	800
Due to A. C. Walsh	310

Make a statement showing the financial condition of the partnership.

6. A. E. French wants to know what he is worth. You find that he owns two pieces of property, one worth \$10,000, the other \$20,000; a house and lot worth \$7,000, and Liberty Bonds of \$3,000. He has a half interest in the Columbia Candy Kitchen worth \$4,000. He values his furniture at \$2,700; library at \$2,000; and paintings at \$890. Among the furniture there is a piano worth \$500 which has not been paid for. There is still \$1,500 due on a \$3,000 automobile. Mr. French owes a grocer \$125; a tailor \$80, and a lawyer \$50. He owns a ring and watch upon which he places a valuation of \$400. What is the proprietorship of Mr. French?

7. P. C. Mitchell conducts a hardware business. He lists the following assets and liabilities as of June 30, 1930:

Cash	\$600
Notes due Creditors	100
Due Eagle City Bank	1,000
Accounts due from Customers	3,600
Hardware	4,400
Notes from Customers	150
Accounts due Creditors	1,600
Furniture and Fixtures	1,000
Delivery equipment	500

Make a balance sheet for P. C. Mitchell as of June 30, 1930. Would you make any suggestions to him as to better methods of compiling his information and his use of terms?

THE BALANCE SHEET

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8. Myron Adler is a jeweler. Upon examination of his records you find on December 31, 1929, that he has the following assets and liabilities:

Cash in Bank	\$400
Cash on Hand	100
Show Cases and Fixtures	140
Typewriter	75
Watches	1,400
Rings	800
Watch Chains	200
Due Peacock Co., for Jewelry	600
Bracelets	150
Accounts Receivable	1,200
Due on Show Cases	40
Due for Express	4

List the items under the proper headings and prepare a balance sheet for Myron Adler.

9. On December 31, 1928, William Cornell had the following assets and liabilities:

Cash	\$480
Customers' Notes	400
Customers' Accounts:	
Edwards Hotel	108
J. R. Roberts	258
William Jones	84
T. E. Billings	48
C. L. Judson	60
R. E. Shell	90
Merchandise Inventory	900
Furniture and Fixtures	180
Owed to Creditors:	
Sheffield Company	200
Logan and Logan	204
Hubbard and Dodge	400
City Transfer Company	90
Owed to Merchants' Bank on Note	600

List the Accounts Receivable and Accounts Payable as totals. Make a balance sheet for Mr. Cornell as of December 31, 1928.

10. On December 31, 1929, William Cornell's records show the following information:

Merchandise Inventory	\$2,500
Notes due Bank	1,000
Delivery Equipment	600
Furniture and Fixtures	700
Cash Increased	200
Accounts Payable Increased	1,000
Accounts Receivable Increased	800
Notes Receivable Decreased	100

Make a balance sheet for William Cornell as of December 31, 1929

11. What has happened to the proprietorship of William Cornell during the year 1929 as shown by your balance sheets in problems 9 and 10? What do you suppose has caused the change?

12. From the books of The Alice Baillie Shop you list the following information:

Assets

Furniture and Fixtures	\$600
Accounts Receivable	2,400
Showcases	400
Shoes valued at	1,250
Auto for delivery purposes	880
Office Supplies	300
Gowns valued at	8,000
Suits valued at	4,000
Five Liberty Bonds	500
Hats	1,000
Other Merchandise	800
Cash	1,250

Liabilities

Quality Wholesale Clothiers	\$2,000
Note on Car	500
Style Shop	100
Note on Merchandise	700
Winton Shoe Company	250

Group the assets and liabilities in their proper classification and make a balance sheet.

REFERENCES FOR FURTHER STUDY

- THE BALANCE SHEET: Folts and Stillman, *Interpretive Accounting*, pp. 22-31
- THE BALANCE SHEET; Kester, *Accounting Theory and Practice*, 3d. Ed., Vol. I, pp. 25-34
- THE BALANCE SHEET: Hodge and McKinsey, *Principles of Accounting*, pp. 25-35

CHAPTER IV

THE BALANCE SHEET; VALUATION OF ASSETS AND LIABILITIES

PURPOSES OF THIS CHAPTER

1. To show the method used in placing a value upon the various assets of a business
 2. To show how the amount of each of the liabilities is determined
-

Up to the present time we have merely listed asset and liability values in balance sheets without giving any consideration to the question as to how we arrived at the values shown. However, some of the most difficult problems in accounting arise from the necessity of determining the value of the assets, and accountants are not always agreed with regard to the method to be used. It is necessary that we turn now to this question of valuation.

Not all assets are evaluated in the same way. Some assets are valued for balance sheet purposes at cost. Some are valued at original cost less the decrease in value due to wear and tear and the lapse of time. Others are valued at cost or market whichever is lower. Still others are valued at the amount which is expected to be realized in cash from them. We shall therefore be required to consider each asset separately.

The valuation of cash involves merely the counting of cash and the reconciliation of the bank account.—All that is necessary to determine the amount of cash to show on the

balance sheet is to count the cash on hand and to compute the amount of the bank balance. The cash on hand should include only those things that would be acceptable for deposit at the bank. It should not include, for example, checks known to be worthless, nor counterfeit money.

As for the balance of the deposit account at the bank, this amount must be correctly determined by a comparison of the record kept by the business with the record kept by the bank. If these two records agree, or if the difference can be explained by making allowance for outstanding checks and other similar items, the amount may be assumed to be correct. The method of reconciling the bank balance will be explained in connection with the cash records to be illustrated in a later chapter.

It is customary to show the total amount of cash as a single item on the balance sheet, but it may be shown in more detail thus:

Cash	
On hand	\$600
In bank	1,425
Total cash	\$2,025

Accounts receivable are valued at face less an allowance for bad debts.—The face value of the accounts receivable is not difficult to determine, for a record is kept of each purchase and the sums are assembled for each customer either on cards or sales tickets or on one page in the ledger. The total of the sums due from the various customers is the total of the accounts receivable.

It would not be correct, however, to show on the balance sheet the total of the accounts due from customers without making allowance for the fact that not all of the customers will pay in full. In fact, it has been found that some

losses on such accounts are certain to occur, no matter how careful the business may be in extending credit to its customers. The difficulty in determining the probable value of the accounts receivable is that all of the accounts may appear to be equally good, and it is necessary to show all of the good assets on the balance sheet. The difficulty is overcome by showing the face value of the accounts receivable and then deducting a sum which represents the probable losses. The sum deducted is called an *allowance for bad debts*¹ and is determined by finding the percentage of losses in past years.

The necessity for an allowance for losses on bad debts may be illustrated by reference to the method of an insurance company in estimating death claims which it will have to pay. A life insurance company may have insured the lives of 1,000 people, all of whom appear to be in equally good health. Yet from tables showing deaths at various ages in the past, the company can be sure that it will have a certain number of death claims to meet each year. It is the same with a company extending credit to its customers. All the customers may appear to be in excellent financial health, but the company can be sure that some of them will be numbered in the mortality statistics of business.

The accounts receivable and the allowance for bad debts should be shown on the balance sheet as follows:

Accounts Receivable	\$5,000	
Less: Allowance for Bad Debts	100	\$4,900

Only the total of the accounts receivable is shown on the balance sheet. If desired, the names of the customers may

¹ The terms "reserve for bad debts" and "reserve for losses on doubtful accounts" are frequently used instead of the terms used here. In the latter part of this book, the name "reserve" is used instead of the name "allowance."

be shown in a schedule which is attached to the balance sheet. Such a schedule is arranged as follows:

SCHEDULE NO. 1

ACCOUNTS RECEIVABLE, DECEMBER 31, 1929

R. A. Smith	\$200	
J. P. Bone	1,400	
F. S. Chilton	1,000	
T. R. Anderson	800	
William Abernathy	1,100	
S. A. Cother	500	
Total Accounts Receivable		\$5,000

If accounts receivable were valued at the amount which the business expected to receive in cash, it would be necessary to make allowance also for cash discounts which will be taken by customers. A cash discount is a deduction which the customer is allowed to make from the face of his bill if he pays within a limited number of days. For example, if Simmons Hardware Company sells Yates and McClure a bill of merchandise amounting to \$250, Simmons Hardware Company may allow the terms "2/10, net 30." This means that if Yates and McClure pay the bill within ten days, they may deduct 2% or \$5 from the face of the invoice, paying only \$245. If they wait more than the ten days, however, they must pay the face of the bill, or \$250, and in any case they must pay within thirty days if they are to retain a good credit standing. If Simmons and Company, then, wish to show their accounts receivable at the amount they will actually receive, they would be compelled to make a deduction not merely for the probable loss on account of bad debts but also for the deductions which their customers will probably make as discounts for paying cash within the time allowed. In practice this allowance is not usually made, however, because the amount of such discounts is not large and because the cash discount is not considered a loss

or a deduction from the amount of the sale but as a cost of doing business, similar to interest paid to the bank. The discount allowed to customers, in other words, is considered as a financial expense.

Notes Receivable are evaluated at face value.—To evaluate notes receivable at face value means that the principal of the note is shown without including any interest which may have accrued. For example, if F. S. Chilton gave Yates and McClure a note for \$1,000 on December 1, due sixty days after date, with interest at 6 per cent, this note would actually be worth more than \$1,000 on December 31 because thirty days of interest would have accrued on the note. The note would be included with the other notes only as \$1,000, however, and the \$5 interest would be shown as a separate item under the heading of Interest Accrued.

Noninterest-bearing notes are also shown at face value. Suppose that the note which Chilton gave merely obligated him to pay \$1,000 sixty days after date nothing being said about interest. In that case the note would be shown as \$1,000 and there would be no interest accrued at December 31.

Frequently no separate allowance for losses on notes receivable is made, even though some of the notes may eventually prove bad, the allowance for bad debts being assumed to cover probable losses on both notes and accounts. If the amount of the notes is large, however, an additional allowance may be necessary. Where this is the case, the notes and the accounts receivable may be added together and the allowance for bad debts deducted from the total, thus:

Accounts Receivable	\$5,000	
Notes Receivable	2,000	
	7,000	
Less: Allowance for Bad Debts	150	\$6,850

As in the case of the accounts receivable, it may be desirable to prepare a schedule of the notes receivable to accompany the balance sheet. Such a schedule may be set up as follows:

SCHEDULE NO. 2

NOTES RECEIVABLE, DECEMBER 31, 1929

<i>Maker</i>	<i>Due Date</i>	<i>Amount</i>	
J. E. Ross	Jan. 15, 1930	\$500	
William Agnew	Feb. 20, 1930	1,300	
James Webb	May 5, 1930	200	
C. W. Leeper	March 31, 1930	1,000	
Total Notes Receivable			\$3,000

If desired, other information such as security given on the note, interest rate, and the date of note, may be given on the schedule. A schedule of this kind would be highly confidential, and would be seen only by the officers of the company.

Merchandise inventory is valued at cost or market whichever is lower.—In interpreting this rule, one must have clearly in mind the meaning of *cost* and *market*. Cost means what was actually paid for the goods, including freight and any other necessary expenses incurred in getting the goods into stock. It does not include storage after the goods are received, nor interest on the money invested in the goods. If the seller allowed a cash discount, this usually is not deducted from the cost, though it may be. For example, if Yates and McClure pay their bill of \$250 to Simmons Hardware Company within ten days after the date of the invoice, they will pay only \$245. Did the goods cost them \$250 or \$245? The usual rule is that the goods cost them \$250 and that they have had an income of \$5 which is similar to interest which they have earned because they had the cash with which to pay. The goods would be valued in the inventory at \$250 plus freight.

Market price means the price which the business would have to pay at the date of the balance sheet if an attempt were made to replace the goods. Consideration must be given to the market price for large and small quantities, for the price may be less if large quantities are purchased. If, for example, Yates and McClure usually purchase a certain article by the gross and there is one price quoted by the gross and another price by the dozen gross, the market price, so far as Yates and McClure are concerned, is the price quoted by the gross.

Merchandise inventory, as stated above, is valued at cost or market whichever is lower. This principle applies to the separate items in stock and not merely to the inventory as a whole. For example, if shoes on hand were purchased at \$5 per pair and they now could be bought for \$4.50 per pair, they would be valued for inventory purposes at \$4.50. If shoes of some other style were bought for \$6 per pair and the market price at the date of the balance sheet, were \$7 per pair, the shoes would be valued at \$6 per pair. The rule thus means that articles which have declined in price are marked down while those which have advanced in price are not marked up for inventory purposes. This is correct even though the selling price has been marked up to follow the market. The practice of using cost or market price, whichever is lower, although generally accepted by accountants, is inconsistent in that it compels a business to write down the value of the goods if the market price has declined but does not permit it to write up the value if the price has advanced. Accountants defend the rule by saying that losses may properly be anticipated in the case of declines in price whereas it would be improper to anticipate profits in the case of advances in price. They contend that the rule is consistent in that the conservative position is always

taken and assets are never valued at more than they are actually worth. The assumption is that it is more important to avoid overvaluation than undervaluation.

Temporary investments are valued at cost or market whichever is lower.—In the valuation of investments, it is necessary to distinguish between temporary investments and permanent investments. Temporary investments consist of stocks or bonds which are purchased for the purpose of employing funds of the business which would otherwise be idle. During the last war, a great many companies purchased liberty bonds in order to help the government finance the war. These would be considered as temporary investments because it was expected that most of these companies would sell the bonds as soon as the war was over. Permanent investments, on the other hand, are usually stocks or bonds of companies owned or controlled by the investing company. The investing company, called the *holding company*, holds the stocks in order to control the other company, which is called a *subsidiary*. Another permanent investment is bonds bought by the company from money set aside as a sinking fund and used as security for other bonds which the investing company itself has issued.

Temporary investments are valued according to the same rule by which inventory is valued and the rule is justified by the same reasoning. It is said that if the market price of investments has declined, the value of such investments should be determined for balance sheet purposes in accordance with the market, but if market values have increased, it would be improper to anticipate profits by writing up the value of the investments because the market price may decline before the investments are sold.

Permanent investments are valued at cost.—Since the permanent investments are not to be sold at any time,

market fluctuations may be disregarded, and the value is usually shown on the balance sheet at cost. Where the stock or bonds become worthless, however, the value should be written off entirely and the investment be not shown on the balance sheet at all. This policy is not consistent with the rule that permanent investments are valued at cost, but if the investment has become worthless, no value should be attached to it.

If the permanent investments are bonds rather than stocks, it is necessary to consider the question of *amortization* of the discount or premium. Amortization can best be explained by an example: A company has purchased bonds due in ten years and has paid \$95 for each \$100 bond. While the bonds were worth only \$95 at the time of purchase, they will be worth \$100 at the time of maturity because the company which issued the bonds will pay the investor \$100 when the bonds come due. This increase in value of \$5 is not to be interpreted as having occurred all in one year, but as an increase in value of approximately fifty cents each year. Likewise, if the investing company had paid \$105 for the bonds, their value when they come due would be only \$100, because the issuing company will pay only \$100 at the maturity of the bonds. In this case, the value of the bonds would be written down by approximately fifty cents each year for each \$100 bond.

Fixed assets other than land are valued at cost less an allowance for depreciation.—The problem of depreciation may be illustrated by a concrete case. Yates and McClure pay \$60 for a typewriter. When they buy the machine they list it on their books at \$60. They have it a year. Should they list it again at \$60? Of course not. The typewriter has decreased in value because they have used it and because the machine is now a year old. As we say in account-

ing, the typewriter has depreciated. At the end of the first year, Yates and McClure show the typewriter on their balance sheet at cost less the amount it has depreciated. How are they to know the amount it has depreciated? There are various methods of determining depreciation. The following is one method:

Suppose Yates and McClure believe the typewriter will last them six years. Now if they paid \$60 for it, at the end of the first year they should show it on the balance sheet thus:

Typewriter	\$60	
Less: Allowance for Depreciation	<u>10</u>	\$50

At the end of two years, thus:

Typewriter	\$60	
Less: Allowance for Depreciation	<u>20</u>	\$40

At the end of six years the typewriter would be discarded and it would not appear on the balance sheet, because the allowance for depreciation would equal the cost of the typewriter.¹

Some assets, such as machinery, lose all or a part of their value because better machines are invented to do the same work or because better methods of performing a manufacturing process are devised. The decrease in the value of an asset due to such causes is known as *obsolescence*. No separate allowance is made on the balance sheet or in the accounting records to provide for obsolescence, however. If it is expected that an asset will become obsolete before it is worn out, the allowance for depreciation is increased by an amount which is thought to be sufficient to provide for obsolescence. For example, if it is estimated that the

¹ The allowance for depreciation is often called reserve for depreciation. Reserve for depreciation is the name used in the latter part of this book.

physical life of a machine is ten years but that the machine will become obsolete at the end of five years, the value of the machine would be reduced to scrap value by the end of the fifth year by setting up an allowance for depreciation equal to the difference between the original cost and the scrap value.

The assets which are valued at cost less an allowance for depreciation include furniture and fixtures, delivery equipment, machinery, and buildings. The length of the useful life of these assets varies greatly according to such factors as the care that is taken of the asset, the nature of the repairs made, the number of days in the week or month that the asset is used, and the speed at which a machine is run. The life of each of the classes of fixed assets which depreciate may be roughly estimated as follows:

Furniture and fixtures	8 to 10 years
Automobile trucks	5 to 8 years
Factory machinery	10 to 15 years
Frame buildings	25 to 40 years
Brick buildings	40 to 60 years

Large organizations sometimes write off the full value of small fixed assets, such as typewriters, at the start. This amounts to treating the entire first cost as a current expense.

Land is usually valued at cost.—Land usually does not depreciate in value in the sense that the asset is worn out, but in a few cases it does. Allowance for such a decrease should be made where land along the banks of streams is subject to washing away or where the value of farm land is exhausted by failure to replace the elements removed from the soil by the growing of crops. Mineral and timber lands decrease in value as the mineral ore is removed or the timber is cut. The decrease in the value of an asset, due to the removal of part of the asset itself, such as mineral ore or

timber, is known as *depletion*, and the allowance for the decrease in value is known as an allowance or *reserve for depletion*.

Changes in the market value of land are usually disregarded in the accounting reports, and the land is shown at cost regardless of market changes. The reasons for the use of this method of valuation are, first, that in the case of land it is usually difficult to estimate the amount of market changes, and second, that an increase or decrease in market value usually has no effect upon the value of the land to the business. In the third place, if land were to be valued at market price, the business would be taking credit for profit on the land before the profit was realized, which is not considered to be sound business practice.

Sometimes, where it is clear that land has increased in value since it was purchased and where the showing of the market value on the balance sheet would help the business in selling a bond issue, land may be shown at market value. Where this is done, however, the balance sheet should indicate that market value is being used, because the reader of the balance sheet will assume that cost value is being used unless he is told otherwise. An increase in the value of an asset due to changes in market prices is known as *appreciation*.

The intangible assets are valued at cost, the value usually being decreased each year.—The intangible assets are difficult to evaluate because it is not easy to determine what they actually are worth to the business. Goodwill is valued at cost, but the better practice is to decrease its value each year for balance sheet purposes until it is shown at only a nominal value. For example, the F. W. Woolworth Company formerly carried its goodwill at \$50,000,000, but the asset was written down over a period of five years until now

it is shown for only \$1. Placing a nominal value upon the goodwill calls the attention to the fact that the company has such an asset but leaves the reader of the balance sheet to place his own valuation upon it. Many companies omit goodwill from the balance sheet even though they actually have such an asset.

Patents are usually valued at cost when they are first acquired, but since the life of patents expires in seventeen years, their value decreases each year until it is entirely gone by the end of the seventeenth year. If improvements in the industry or new inventions cause the patent to lose its value sooner than this time, the value may decrease even more rapidly than the legal life would indicate. The same principle applies to copyrights, the legal life of a copyright being twenty-eight years.

A trademark does not expire in the same way that patents and copyrights do, but is good as long as the company continues to use it. Trademarks are valued in the same way that goodwill is valued. We are now ready to pass to the other half of the balance sheet and see how the various liabilities are determined.

The valuation of liabilities is relatively easy.—Liabilities are expressed in terms of dollars and cents, and there is no problem of finding what must be paid. The only difficulty involved arises from the necessity of keeping accurate records of what liabilities have been incurred.

Accounts Payable is an item appearing on practically all balance sheets. Information regarding the amounts owed to others on open account may be gathered from the records a proprietor keeps under the headings of individuals or firms. The proprietor has the invoices which show the names of the concerns from which the purchases are made, the dates when the accounts are due, and the amounts

involved. He can collect these various invoices and list them in a schedule showing such information.

A record of the notes payable should be carefully kept, because a business man needs to know when these obligations are due. If a proprietor has several notes outstanding, it is well for him to list them in schedule form. Such a schedule may be used to support or to supplement the total notes payable as shown in the balance sheet. The schedule may be drawn up in this manner:

PAYEE	FACE VALUE	DATE OF ISSUE	TIME TO MATURITY	DATE OF MATURITY	INTEREST RATE

Careful records should be kept of all mortgages which a business may have upon its property so that provisions may be made for payment of the mortgages when they become due and for the payment of interest at the interest dates. Interest on mortgages is usually paid every six months.

QUESTIONS FOR DISCUSSION

1. Define or explain:

- a. Allowance for bad debts
- b. A schedule
- c. Valuation at cost or market
- d. Depreciation
- e. Valuation at cost less an allowance for depreciation
- f. Obsolescence
- g. Depletion

2. Name the assets in the order in which they appear on the balance sheet and state how the value of each is determined.

3. Fred Mills, in counting his cash, finds a Canadian dime. Is he correct in estimating the value of that coin at ten cents? In Mills' currency there is a dollar bill torn in two. How should he count it?

4. "There is no need for me to keep a record of what my goods cost me. I just make a guess at what they are worth." Criticize the statement.

5. Simpkins Company has owed Cole and Brown \$50 for the past nine years. Should the \$50 be carried as an account receivable?

6. "Kenneth Williams has owed us for purchases for a whole year, but we know he will pay sooner or later because he always pays in time." Is this a bad debt?

7. What difference does it make whether or not an accountant makes allowance for bad debts? Why must an allowance be made for depreciation?

8. F. P. Batson submits a balance sheet to the Central Bank and asks to borrow \$5,000. The bank finds upon examination that Batson has made no allowance for depreciation. The credit manager of the bank tells you to inspect Batson's records and find what amount should be deducted. What information would you want?

9. Cole and Brown estimate that at the end of ten years they can sell at \$10 a typewriter for which they paid \$100. What valuation should be used on their balance sheet at the end of the first year? Why?

10. What factors cause a building to depreciate?

11. A city ordinance is passed declaring that after five years no wooden buildings are to be allowed within a certain district. Calvin Milford has completed the construction of a wooden building in that district of the city. Has the value of the building been affected? Does the ordinance have any effect upon the value of land on which the building stands?

12. The Miracle Mine Company lists its mine at \$500,000. Two years later the mine is still listed at \$500,000, though it was operated in the meantime. Is that probably a true representation? Could it be a true representation?

13. The ferry across the river at Summerville has operated for several years at a substantial profit. The state constructs a free bridge near the town. What will be the effect upon the value of the ferry?

14. The owners of 640 acres of timber land decide that it will take two years to cut the timber, one-half of the timber to be cut each year. The timber is worth about \$200 per acre. What value should the owners show on the balance sheet at the end of the first year?

15. Is the ordinary balance sheet without any schedules sufficient for most purposes? Why?

16. The Universal Bank refuses to lend the Harmonic Orchestra the sum of \$500, because it says the leader is "too eccentric," and "does such queer things." The orchestra association presents a satisfactory balance sheet. Should the loan be made? Why, or why not?

PROBLEMS

1. You find upon investigation of the balance sheet of the A. P. Norris Automobile Company that there is no deduction from assets on account of depreciation. Write a brief report to the president of the company stating why this deduction should be made.

2. Call upon some business man in your community and ask him how he evaluates his assets. Before you go, make a list of the questions you want to ask him. Use these by way of suggestion:

- (1) Do you make a balance sheet?
- (2) Do you make it weekly, monthly, semi-annually, or annually?
- (3) Do you make it to determine only your proprietorship, or does it help you in running your business?
- (4) Do any of your customers fail to pay their debts? If so, what per cent of accounts receivable are bad debts?
- (5) Do you get any notes receivable?
- (6) How do you evaluate your inventory?

3. Obtain an actual balance sheet from some business concern. If you live in a large city you will frequently find some of them published in the newspapers. Almost any bank or business firm will let you take a copy of their balance sheet if they learn that you want to use it for school purposes. Study the balance sheet, considering the probable methods used in arriving at a valuation of assets and liabilities. Write a report to the president of the company stating your opinions and criticisms.

4. On January 1, 1930, upon examination of the books of J. A. Clemens, you find that the following accounts are due him: Henry White

owes \$120 due in one month; M. S. Grant \$230 due in two months; W. S. Scott \$76 due in 30 days; F. A. Crosby \$172 in 2 months; Dick Norris \$26 in 15 days; C. O. Smith \$32 in 13 days; Paul Peterson \$320 in six months, and Emil Carlson \$230 in 6 months. Draw up a form of schedule to contain this information. Place the information in the schedule.

5. You find that J. A. Clemens has the following merchandise inventory: Canned goods, \$700; sugar, \$200; flour, \$156; tea and coffee, \$96; butter and eggs, \$12; cereals, \$24; and miscellaneous, \$245. Make a schedule showing this information.

6. J. A. Clemens has the following accounts payable: American Creamery Company, \$74; National Grocery Company, \$240; Kidd and Myers, \$142; and R. A. Sells, \$122. Make a schedule showing this information.

7. After you have compiled the information given in problems 4, 5, and 6, prepare a balance sheet for J. A. Clemens using also the following data: His cash was \$520, \$150 of which he had on hand and the balance in the bank. There was a note receivable of \$150. Furniture and fixtures were valued at \$500, but twenty per cent should be deducted for depreciation. Delivery equipment was \$600, but ten per cent should be deducted for depreciation. Mr. Clemens valued his building at \$3,000 and his land at \$10,000. There were two notes payable, each for \$200. There was a mortgage of \$2,000 on his property.

8. Write a brief report to J. A. Clemens based on problems 4, 5, 6, and 7. Set forth your opinions and criticisms.

CHAPTER V

THE STATEMENT OF INCOME AND EXPENSE; ITS PRINCIPAL DIVISIONS

PURPOSES OF THIS CHAPTER

1. To explain what kind of information is contained in the statement of income and expense
 2. To show how the information is arranged
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In the present chapter we shall study more carefully the second of the two most important accounting reports, namely, the statement of income and expense.¹ The balance sheet alone does not give the business manager all of the information he needs to have about the financial condition of his business, so the statement of income and expense is necessary as a complement to the balance sheet. In fact each report is necessary for a proper interpretation of the other. The relation of these two reports to each other should be clearly understood. The balance sheet is a cross section or a snap-shot of the financial condition of the business at a single moment of time; and a comparison of two such cross sections at different times shows how the business has progressed in the period of time elapsing between the dates of the two balance sheets. What two such balance sheets do not show, however, is the reason for the progress

¹ The accounting report showing the items of income and expense is frequently called the statement of profit and loss, but the title used here seems to the authors to be preferable.

of the business or for the failure of the business to make progress, if that be the case. This information is contained in the statement of income and expense. This report shows the sources of all income and the amounts of each kind of expense for the period of time elapsing between the dates of the two balance sheets. The statement of income and expense is thus a very important accounting report.

The use of the same form of statement of income and expense, year after year, aids in business administration.—

In the discussion of the form of the balance sheet, it was explained that the form is not standardized. The same thing is true of the statement of income and expense. Each business should adopt the form which seems best suited to it, taking into consideration the nature of its income and the classes of expenses which it incurs, and it should use this form year after year. A change in the form destroys the possibilities of comparison to the extent that changes are made. For example, if a company which has previously classified its operating expenses as selling and administrative now begins to classify them as selling, delivery, and administrative, the possibility of comparison of expenses in any one year with expenses in preceding years is, in considerable degree, destroyed. This statement is not to be taken to mean that a poor classification of expenses or a poor form of financial statement once adopted is to be continued indefinitely, but the advantages of a better form must be weighed against the disadvantages from the loss of the possibility of comparison. When changes are made, the preceding reports should, if possible, be revised to conform to the new practice.

The statement of income and expense is usually made in report form.—In the chapter in which the form of the balance sheet was discussed, it was pointed out that the

data contained in the balance sheet may be arranged in account form or in report form. The income and expense data may also be arranged in these two forms. In the account form, expenses are listed on one side of the report and income on the other, the difference between the total expense and the total income being the net income of the business for the period. This form of statement of income and expense, however, is very seldom used, and attention will therefore be centered upon the report form which is the customary form. A statement of income and expense for the Western Wholesale Company may be found at the close of this chapter (p. 76). The student should constantly refer to this statement throughout the discussion which follows.

The form of the heading of the statement of income and expense is important. It is customary to place first the name of the firm, followed by the name of the statement and the period covered. It should be noted that since the statement of income and expense covers a period of time and is not for one moment of time, as is the balance sheet, it is necessary that the heading indicate the beginning and end of the period covered. The heading might be as follows:

WESTERN WHOLESALE COMPANY

STATEMENT OF INCOME AND EXPENSE FOR THE YEAR ENDING
DECEMBER 31, 1929

The report may cover a year, a half year, a quarter year, or a month. At one time these statements were not made out at regular intervals but only on certain occasions, such as at the completion of a foreign voyage in the case of companies engaged in shipping. At the present time, all concerns, which have any accounting systems at all, prepare statements at least once a year, and many of them prepare monthly or quarterly statements. When the statements are

made out annually, the year covered by them is called a *fiscal year*. The fiscal year does not necessarily coincide with the calendar year, though it frequently does. The fiscal year should preferably close at a time when business is at its seasonal dullness and when the inventory is low. If such a year is adopted, the interruption to business in connection with inventory taking and the closing of the books will be less than it would be at other times.

The statement of income and expense has several main divisions.—The statement of income and expense may have the following six divisions:

1. Sales
2. Cost of goods sold
3. Operating expenses
4. Nonoperating income
5. Nonoperating expense
6. Net Income

These divisions will usually be found in the statements of mercantile businesses, though slight variations will be found. Nonoperating income is frequently called *Other Income*, and nonoperating expenses are frequently called *Deductions from Income*. In the main, however, the items listed above may be considered as the usual divisions. They should always be given in the order shown. The content and arrangement of each division will now be discussed.

The sales division shows the gross sales, the deductions from sales, and the net sales.—The gross sales include all of the sales made even though some of the merchandise sold was returned for credit or the customer was given credit on account of defective merchandise, or for some other reason. In order to determine the net sales, therefore, it is necessary to deduct from the gross sales, the sales returns, and the

sales allowances. The sales returns should be shown separately from the sales allowances because sales returns do not affect the profits of the business in the same way that sales allowances do. When merchandise is returned because it is not what the customer wanted, the merchandise is put back into stock and may be sold again. But when a customer is given an allowance because the merchandise sold was defective, or for any other reason, the merchandise is not returned and there is no compensation to the business for the allowance, except that the business may have gained the goodwill of the customer. Large sales allowances may, therefore, be more serious for the business than are large sales returns. Both should, of course, be kept as low as possible by the elimination of the causes for returns and allowances, and they should be shown separately in the statement of income and expense in order that the manager may see the extent to which he is succeeding in this respect.

The form of the sales division of the statement may be illustrated as follows:

Gross Sales		\$800,000
Less: Sales Returns	\$6,000	
Sales Allowances	2,000	8,000
Net Sales		\$792,000

By way of emphasis, it may be said that the sales should include only sales of merchandise in which the business regularly deals. If the business disposes of its furniture and fixtures or its delivery trucks, the transaction should not be recorded as a sale.

Several factors should be considered in determining cost of goods sold.—The cost of goods sold is found by taking into consideration the following:

1. Merchandise inventory at the beginning of the period.

2. Purchases made during the period.
3. Freight In.
4. Merchandise inventory at the end of the period.

Reference to the statement of income and expense of the Western Wholesale Company at the end of this chapter discloses the fact that on December 31, 1928, the merchandise inventory was valued at \$120,000. This constituted the ending inventory for the year 1928, and the beginning inventory for the year 1929. During the course of the year 1929, purchases to the amount of \$800,000 were made. Purchases, added to the beginning inventory constitute the total amount of goods on hand during the year. Now not all of that amount was disposed of. As a matter of fact \$275,000 was still on hand at the end of the year 1929. When the ending inventory is deducted from the sum of the beginning inventory and the purchases, the difference constitutes the cost of goods sold. This is the way the information is arranged:

Cost of goods sold:	
Beginning inventory, Jan. 1, 1929	\$120,000
Purchases	800,000
	\$920,000
Less ending inventory, Dec. 31, 1929	275,000
Cost of goods sold	\$645,000

The section of the statement of income and expense, known as the Cost of Goods Sold, may contain items other than those mentioned. Certain other expenditures are usually reckoned as a part of the cost of goods sold. For example, there is a charge for freight on the merchandise which has been purchased. This item is called Freight In. It is a part of the cost in the same sense that purchases are a part of the cost. Consequently, Freight In, may be added with the beginning inventory and purchases.

The balance remaining after the cost of goods sold is deducted from net sales is called *gross profit*. Gross profit thus represents the amount of mark-up on the cost of the goods which have been sold, no expenses of the business having been deducted up to this point in the statement.

Operating expenses are shown next on the statement.—By operating expense is meant the cost of operating the business as distinguished from financial expenses such as interest paid on notes or bonds. The operating expenses are further classified into selling expenses and administrative expenses. The selling expenses, as the name implies, are all of those expenses directly related to selling. In a business in which there is a sales manager, selling expense includes all expenses incurred by the sales manager and the subordinate executives or employees who are responsible to him. Selling expense thus includes such expenses as the salaries of sales clerks, the expenses of window trimming, newspaper or other advertising expense, and the various delivery expenses such as salary of the truck driver, the cost of gasoline and oil used by the truck, and repairs to the truck. Administrative expenses include all expenses incurred in the general administration of the business, such as the salary of the president, office salaries, postage and stationery, telephone and telegraph expense, insurance, and the expense of sending buyers to a distant market.

The operating expenses should be shown in detail, for it is not sufficient for the manager to know merely that operating expenses have increased or decreased. He must know which items of expense have increased or decreased and how much. These expense items are grouped to show the total selling expense and the total administrative expense, and the selling expense and the administrative expense are then added to show the total operating expenses.

The total operating expenses are then deducted from the gross profit to obtain the figure for the net profit.

Sometimes the statement of income and expense is condensed by showing merely the total selling expenses and the total administrative expenses, these being added to get the figure for the total operating expenses. If the statement would otherwise be so long that it would be difficult to grasp the significant facts, it may be condensed in this way. Where this is done, however, separate schedules of selling expenses and administrative expenses should be attached to the condensed statement so that the manager may have the detailed information if he desires it.

Nonoperating income and nonoperating expense are placed last on the statement of income and expense.—The operating expenses are followed on the statement of income and expense by the nonoperating income and these are followed by the nonoperating expenses. The nonoperating income includes income derived from sources other than the main business of the concern. In a mercantile business, for example, the operating income would be that derived from the purchase and sale of goods, but there may be other income from interest on notes receivable, or on investments, or from the rental of a part of the store building, or from discounts received for payment of cash for purchases. When the nonoperating income is added to the net profit derived from sales, the total is called *gross income*. Nonoperating income is frequently spoken of merely as *other income*.

The nonoperating expenses include all those expenses or costs incurred outside the regular operations of the business. To use the mercantile business again as an example, the operating expenses are those expenses incurred directly or indirectly in the buying and selling of goods, while the non-

operating expenses are those costs incurred in other phases of the business including the financing of the business. Concretely, these include interest paid whether on notes payable or on mortgages, and discounts allowed to customers for the payment of cash within the time allowed. When the nonoperating expense is deducted from the gross income on the statement of income and expense, the balance is called *net income*. Nonoperating expense is frequently called *deductions from income*.

A word should be added relative to the treatment of purchases discounts and sales discounts, which have been classified as nonoperating income and nonoperating expense respectively. Purchases discounts are usually considered as nonoperating income because they are similar to interest earned. If a concern has the cash with which to pay its bills within a short time, it receives a reduction from the amount of the invoice which is similar to earning interest. When Yates and McClure paid the invoice of Simmons Hardware Company of \$250, they actually paid only \$245, the difference between the invoice price of the goods and the amount paid in cash being income to Yates and McClure. They have received merchandise worth \$250 for which they have paid only \$245, the \$5 income arising because they had the cash to pay within a limited time. It should be pointed out that while the interpretation given is the usual one, some business concerns, under such circumstances, consider that they have received merchandise worth only \$245.

Sales discounts, like purchases discounts, are usually considered a financial item and not a reduction from the selling price of the goods. Simmons Hardware Company, in the case cited in the preceding paragraph, would consider that they had made a sale of \$250 for which they had received

ELEMENTS OF ACCOUNTING

WESTERN WHOLESALE COMPANY

STATEMENT OF INCOME AND EXPENSE FOR THE YEAR ENDING
DECEMBER 31, 1929

Gross Sales		\$800,000.00
Less: Sales Returns	\$6,000.00	
Sales Allowances	<u>2,000.00</u>	<u>8,000.00</u>
Net Sales		792,000.00
Cost of Goods Sold:		
Beginning Inventory	120,000.00	
Purchases	<u>800,000.00</u>	
	920,000.00	
Less Ending Inventory	<u>275,000.00</u>	
Cost of Goods Sold		<u>645,000.00</u>
Gross Operating Profit		147,000.00
Operating Expenses		
Selling Expenses		
Advertising	\$10,000.00	
Salesmen's Salaries	40,000.00	
Delivery Expenses	4,000.00	
Miscellaneous	<u>1,000.00</u>	
Total Selling Expenses		55,000.00
Administrative Expenses		
Heat and Light	3,000.00	
Office Salaries	13,000.00	
Telephone and Telegraph	200.00	
Legal Expense	500.00	
Miscellaneous	<u>1,000.00</u>	
Total Administrative Expenses		17,700.00
Total Operating Expenses		<u>72,700.00</u>
Net Operating Profit		74,300.00
Nonoperating Income		
Purchase Discounts	5,000.00	
Interest on Notes Receivable	<u>300.00</u>	
Total Nonoperating Income		5,300.00
Gross Income		<u>79,600.00</u>
Nonoperating Expense		
Sales Discounts	16,000.00	
Interest on Notes Payable	2,000.00	
Interest on Bonds Payable	<u>4,200.00</u>	
Total Nonoperating Expense		22,200.00
Net Income		<u>\$57,400.00</u>

\$245 in cash, the \$5 being a discount similar to interest paid to Yates and McClure for their payment of the invoice within a limited time, which is usually ten days.

The statement of income and expense of the Western Wholesale Company is shown in its entirety on the opposite page.

QUESTIONS FOR DISCUSSION

1. Name and explain the principal items of information shown in the statement of income and expense.

2. Assume that the assets, liabilities, and proprietorship of two stores are precisely the same. If you contemplated investing in either the one or the other store, what information would you desire in addition to that shown on the balance sheet?

3. Mr. Kane owns stores in Detroit, Chicago, and St. Louis. He has a manager for each store. How could he compare the efficiency of his managers?

4. What is the distinction between gross profit and net profit? Between gross income and net income? Could the net profit be the same amount as the net income? How?

5. Mr. Colby owns two stores in Toledo. Briefly, their balance sheets are as follows:

STORE NO. 1

Balance Sheet, December 31, 1929

Assets	\$24,000
Liabilities	8,000
Proprietorship	\$16,000

STORE NO. 2

Balance Sheet, December 31, 1929

Assets	\$12,000
Liabilities	2,000
Proprietorship	\$10,000

The profits of the former for the year were \$1,600; for the latter \$1,200. Which is the better investment?

6. What items might one find on the statements of income and expense of the following enterprises: a retail store, a bank, a law firm, a street car company, a department store, an automobile manufacturing company, a tollbridge, a newspaper?

7. Explain the difference between operating and nonoperating expenses; operating and nonoperating income. Give examples of each.

8. On January 1, Mr. Fuller had valued his merchandise at \$8,000. His purchases during the month of January were \$16,000 and his sales \$20,000. On January 31, he valued his inventory at \$8,400. His expenses were \$2,000. What was his net profit for the month?

9. During the month of December, Mr. Fuller sells furniture and fixtures for \$400. Is this a sale? If not, where should the transaction be shown in Mr. Fuller's reports?

10. How would you classify the following operating expenses:

Rent	Depreciation on automobile
Taxes	Heat and light
Traveling expenses	Advertising
Office salaries	Salesmen's salaries
Insurance	

11. On December 31, 1928, J. A. Otis was shown this summarized statement of income and expense:

Sales	\$18,000	
Cost of goods sold	10,000	
Gross profit on sales		\$ 8,000
Operating expenses		6,000
Net profit		\$ 2,000

One year later, this was his statement:

Sales	\$36,000	
Cost of goods sold	22,000	
Gross profit on sales		\$14,000
Operating expense		13,500
Net profit		\$ 500

Sales have increased but profits have decreased. How do you account for this? What remedies would you suggest? What improvements in the form of the statement of income and expense would you suggest?

12. Mr. Fuller sells \$200 worth of merchandise. The goods are returned because they are unsatisfactory. Where should this item be shown in the reports?

13. Mr. Fuller purchases merchandise for \$2,000. In order to get the goods to his town he has to pay freight of \$25. Is this a part of cost of goods sold? If so, where should it be shown in the reports?

14. How is the inventory for the beginning of the period determined? For the end?

15. What advantages do you see in classifying expenses? Explain and give examples of expense classifications.

16. Describe the two classes of operating expenses and some items you would expect to find under each.

PROBLEMS

1. On December 1, 1929, George King had inventory of merchandise of \$2,400. During the month he purchased \$3,000 worth of goods and sold \$4,000. On December 31, his inventory was \$2,800. Determine the cost of goods sold.

2. You are acting as bookkeeper for George King. On January 31, 1930, you are making a statement of income and expense. The inventory of January 1 was \$2,800. Purchases during the year were \$3,500, sales \$8,000, and expenses \$2,000. You misplaced your records, but in addition to this information you remember that the gross profit is \$4,000. What item is missing? Could you determine it from the above amounts? If this were not possible what would you be compelled to do?

3. D. A. Voss is a lawyer and during the year has received from fees for his services the sum of \$12,850. His expenses were as follows:

Rent	\$ 850
Stenographer	1,000
Stationery and postage	196
Heat and light	120
Telephone service	20

What was his profit for the year 1928?

4. F. A. Dolan, a retail druggist, had Merchandise Inventory on January 1, 1930, of \$5,600. His purchases during the month were \$5,000, and his sales \$7,160. His inventory on January 31, \$5,800. He incurred the following expenses:

Stationery and postage	\$ 9
Paper and twine for wrapping purposes	54
Deliveries to customers	40
Heat and light	39
Rent	120
Advertising	20
Salaries of sales clerks	150

Make a statement of income and expense for Mr. Dolan.

5. H. Noble, a retail merchant, furnished you with the following data:

Merchandise Inventory, Jan. 1, 1929	\$18,000
Purchases	46,000
Sales	60,000
Postage and stationery	60
Taxes	140
Salaries of sales clerks	4,000
Depreciation on furniture and fixtures	160
Depreciation on delivery equipment	150
Insurance on stock	120
Insurance on delivery equipment	40
Owner's salary	4,000
Wrapping paper and twine	80
Traveling expense for buying	240
Advertising	180
Salary for delivery driver	1,600
Merchandise Inventory, Dec. 31, 1929	24,000

Prepare a statement of income and expense for Mr. Noble.

6. The inventory of merchandise of the Acorn Company on January 1, 1930, was \$7,000. Purchases of merchandise during the month were \$39,000. On January 31, the inventory was \$7,400. Sales were \$50,000. You find that the following expenses were incurred during the month:

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Sales salaries	\$1,000
Buying expenses	150
Heat and light	200
Advertising	300
Telephone and telegraph	40
Salary of the delivery driver	160
Repairs to delivery truck	20
Office supplies	160
Office salaries	400
Depreciation on building	28
Depreciation on delivery truck	6
Depreciation on furniture and fixtures	4
Insurance on stock of merchandise	16
Insurance on delivery truck	5
Insurance on building	32

Prepare a statement of income and expense for the Acorn Company.

REFERENCES FOR FURTHER STUDY

- THE STATEMENT OF PROFIT AND LOSS: Kester, *Accounting Theory and Practice*, 3d ed., Vol. I, pp. 45-58
- THE PROFIT AND LOSS STATEMENT: Folts and Stillman, *Interpretive Accounting*, pp. 50-61

PART III

HOW THE INFORMATION FOR THE REPORTS
IS COLLECTED AND RECORDED

CHAPTER VI

BUSINESS TRANSACTIONS AND THEIR EFFECT UPON THE ACCOUNTING REPORTS

PURPOSES OF THIS CHAPTER

1. To show how assets and liabilities are changed by various business transactions
 2. To show the effect of income and expenses upon the items of the balance sheet
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Having learned in preceding chapters of the value of the two most important accounting reports, we are now ready to proceed to a study of the methods of collecting the information which is necessary for a preparation of the reports. This study begins with the business transactions and their effect upon the reports because the reports are merely a reflection of what the business has done during the accounting period.

The amounts of items to be shown on the accounting reports are continually changing.—Let us consider first the changes in the items of the balance sheet. The balance sheet, as learned earlier, shows the amounts of the various asset, liability, and proprietorship items at a single instant of time. If two balance sheets were to be made for the same business at different hours of the day, they would not be exactly alike. The amount of cash, for example, constantly changes throughout the day. The amount of cash on hand increases as cash is received from cash sales and from remittances of customers on account, and decreases as

expenses or accounts payable are paid. Likewise, the amount of the accounts receivable increases each time a sale on credit is made and decreases each time cash is received from a customer to apply on account or a sales allowance is granted. The same principle applies to each of the other assets and liabilities, and the amount shown on the balance sheet at any given date is the balance as of that particular time. These balances are obtained by adding to the balances of the last report all increases since that date and subtracting all decreases.

The accounting equation is a fundamental principle which is applied in recording the effects of business transactions.—The accounting equation, the final form of which is the balance sheet, is as follows:

$$\text{Assets} = \text{Liabilities} + \text{Proprietorship}$$

This equation is just like an equation in mathematics. We can add to either side provided we add the same amount to the other side, or provided we subtract the same amount from some other item on the same side. But if we add to one side without adding to the other or without subtracting from some other item on the same side our equation will be thrown out of balance and we cannot prepare a correct balance sheet until we find the mistake. If we add to the assets without adding to the liabilities or proprietorship or subtracting from some other asset, obviously the two sides will not balance.

Some transactions affect both sides of the accounting equation, while some affect two items on the same side.—To illustrate the effect of business transactions upon the equation, let us trace the effect of transactions in connection with the formation of a new business. A. L. Evans puts \$5,000 in the bank with which to establish a grocery business.

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There were no items on the balance sheet before because the business was just being started, but if Evans prepared a balance sheet at this time it would show:

<i>Assets</i>		<i>Proprietorship</i>	
Cash	5,000	A. L. Evans, Capital	5,000

Evans now rents a building for \$25 per month and pays one month's rent. The effect of this transaction is as follows:¹

<i>Left Side</i>		<i>Right Side</i>	
Cash decreased	25	Proprietorship decreased	25

The balance sheet after giving effect to this transaction would be:

<i>Assets</i>		<i>Proprietorship</i>	
Cash	4,975	A. L. Evans, Capital	4,975

Evans now buys showcases and a typewriter at a cost of \$200. He does not pay cash but buys on account, being allowed thirty days in which to pay. The effect is as follows:

<i>Left Side</i>		<i>Right Side</i>	
Furniture and Fixtures increased	200	Accounts Payable increased	200

Evans' balance sheet would now be:

<i>Assets</i>		<i>Liabilities and Proprietorship</i>	
Cash	4,975	Accounts Payable	200
Furniture and Fixtures	200	A. L. Evans, Capital	4,975
Total	<u>5,175</u>		<u>5,175</u>

¹ It would be proper to set up Prepaid Rent as an asset, in which case the proprietorship would remain at \$5,000. Since a balance sheet is not to be prepared until the end of the month, however, the amount of rent services which has been paid for will have been received by the business by that time and the rent must be shown as an expense for the current month. To avoid the necessity of making an adjustment at the end of the month, the rent is entered as an expense when it is paid.

Evans now buys merchandise on account to the amount of \$4,000. The effect of this transaction is:

<i>Left Side</i>		<i>Right Side</i>	
Merchandise on hand increased	4,000	Accounts Payable increased	4,000

The balance sheet now would appear as follows:

<i>Assets</i>		<i>Liabilities and Proprietorship</i>	
Cash	4,975	Accounts Payable	4,200
Furniture and Fixtures	200	A. L. Evans, Capital	4,975
Merchandise	4,000		
Total	9,175	Total	9,175

Evans now pays \$500 cash for a delivery truck. The result of this transaction is:

<i>Left Side</i>		<i>Right Side</i>	
Cash decreased	500	No change	
Delivery equipment increased	500		

The balance sheet now would be:

<i>Assets</i>		<i>Liabilities and Proprietorship</i>	
Cash	4,475	Accounts Payable	4,200
Furniture and Fixtures	200	A. L. Evans, Capital	4,975
Merchandise	4,000		
Delivery equipment	500		
Total	9,175	Total	9,175

Accounts payable to the amount of \$3,000 are now paid in cash. This transaction has the following effect:

<i>Left Side</i>		<i>Right Side</i>	
Cash decreased	3,000	Accounts Payable decreased	3,000

The balance sheet now becomes:

<i>Assets</i>		<i>Liabilities and Proprietorship</i>	
Cash	1,475	Accounts Payable	1,200
Furniture and Fixtures	200	A. L. Evans, Capital	4,975
Merchandise	4,000		
Delivery equipment	500		
Total	6,175	Total	6,175

In each of these cases whenever any amount has been added to one side, the same amount has been added to some item on the other side of the balance sheet or subtracted from some other item on the same side.

Some transactions affect more than two items of the balance sheet.—Evans now sells merchandise which cost him \$500, receiving in cash \$750. This transaction is more than a mere exchange of one item on the asset side of the equation for another on the same side as it yields a profit of \$250. This goes to the owner of the business, increasing the equity of Evans in his business to that amount. The effect of this transaction is as follows:

<i>Left Side</i>		<i>Right Side</i>	
Merchandise decreased	500	Proprietorship increased	250
Cash increased	750		

The net effect of the transaction is to increase the total of each side by \$250. After effect is given to the transaction, the balance sheet is as shown below:

<i>Assets</i>		<i>Liabilities and Proprietorship</i>	
Cash	2,225	Accounts Payable	1,200
Furniture and Fixtures	200	A. L. Evans, Capital	5,225
Merchandise	3,500		
Delivery equipment	500		
Total	6,425	Total	6,425

Now without giving the balance sheet after each transaction, let us consider the effect of a number of other transactions. Evans pays \$500 of the accounts payable that he still owes. He is allowed 2 per cent discount as a purchase discount. He therefore pays cash of only \$490. The effect of this transaction is to decrease cash \$490, decrease accounts payable \$500, and increase proprietorship

\$10. Set forth in the same form as that we have been using, this would be as follows:

<i>Left Side</i>		<i>Right Side</i>	
Cash decreased	490	Accounts Payable decreased	500
		Proprietorship increased	10

The net effect is therefore to decrease the totals of the two sides by \$490. The reason the proprietorship is increased by \$10 is that the \$10 which Evans was allowed to deduct from the face of the invoice was in the nature of interest on the money he paid.

Evans next sells to various customers on account goods which cost him \$2,000, the sales price being \$3,000. The effect of this transaction is:

<i>Left Side</i>		<i>Right Side</i>	
Merchandise decreased	2,000	Proprietorship increased	1,000
Accounts Receivable increased	3,000		

The final effect, therefore, is to increase the totals of the two sides by \$1,000. Now Evans collects \$1,960 cash from some of these customers, the amount of the sales to these customers having been \$2,000. The difference of \$40 is the discount which Evans allowed them for paying cash within 10 days. The effect upon the balance sheet items would be:

<i>Left Side</i>		<i>Right Side</i>	
Cash increased	1,960	Proprietorship decreased	40
Accounts Receivable decreased	2,000		

Evans now buys merchandise to the amount of \$4,000 paying \$500 in cash and the rest on account. The result of this transaction is:

<i>Left Side</i>		<i>Right Side</i>	
Merchandise increased	4,000	Accounts Payable increased	3,500
Cash decreased	500		

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The net effect is to increase both sides by \$3,500. Next he pays on account \$2,000, receiving a discount of 2 per cent or \$40. The effect of this transaction is:

<i>Left Side</i>		<i>Right Side</i>	
Cash decreased	1,960	Accounts Payable decreased	2,000
		Proprietorship increased	40

Evans now borrows \$1,000 from the bank, giving his note promising to pay that amount with interest after 60 days. The effect of giving the note and receiving the cash borrowed is:

<i>Left Side</i>		<i>Right Side</i>	
Cash increased	1,000	Notes Payable increased	1,000

At the end of the month, Evans pays the salary of the delivery boy, \$80, and that of the sales clerk \$100. The result is:

<i>Left Side</i>		<i>Right Side</i>	
Cash decreased	180	Proprietorship decreased	180

Evans now wishes to prepare a balance sheet to show what assets he has and to determine whether he has more or less than he had when he started business, that is, whether he has made a profit during the month, and if so, how much. He realizes that his delivery truck is not worth as much now as it was worth when he purchased it, as he knows that automobiles soon wear out. He knows that the same thing is true of his showcases and his typewriter. He, therefore, decides to value these assets at cost less a small allowance for decrease in value or, to use the accounting term, an allowance for depreciation. This allowance is small, and in this case failure to make the allowance would not materially affect profits; but Evans wishes to keep his books on the correct basis from the beginning. Since an automobile

ELEMENTS OF ACCOUNTING

A. L. EVANS

BALANCE SHEET SEPTEMBER 30, 1930

<i>Assets</i>		<i>Liabilities</i>	
<i>Current Assets</i>		<i>Current Liabilities</i>	
Cash		Accounts Payable	\$2,200.00
Accounts Receivable	\$1,000.00	Notes Payable	1,000.00
Less, Reserve for Bad Debts	9.00		
Merchandise Inventory		Total Liabilities	3,200.00
Total Current Assets		<i>Proprietorship</i>	
<i>Fixed Assets</i>		A. L. Evans, Capital	6,037.00
Furniture and Fixtures	200.00		
Less: Allowance for Depreciation	2.00		
Delivery Equipment	500.00		
Less: Allowance for Depreciation	7.00		
Total Fixed Assets	691.00		
Total Assets	\$9,237.00	Total Liabilities and Proprietorship	\$9,237.00

with reasonable care will last five or six years, an allowance of \$7 is made for depreciation on the truck, and an allowance of \$2 for depreciation on the furniture and fixtures on the assumption that these latter assets will last about eight years. The reduction in the value of these assets reduces proprietorship by a corresponding amount. In accordance with accepted accounting methods, however, the assets are shown on the balance sheet at original cost with these allowances deducted.

It is also realized that not all of the accounts receivable may be collected and that an allowance should be made for possible losses. The amount of the losses on bad debts varies according to the business, but we may assume an allowance of approximately $\frac{1}{4}$ of 1 per cent of the sales, or \$9. This reduces the value of the accounts receivable on the left side and proprietorship on the right side. The losses on bad debts, like depreciation, are as much a cost of running the business as is the cash paid out for sales salaries.

After these allowances have been made, Evans prepares his balance sheet. It is set up as shown on page 92.

The balance sheet shows that Evans has an investment in the business to the amount of \$6,037, whereas his original investment was only \$5,000. The business must, therefore, have had a profit during the month of \$1,037. In order for Evans to know how this increase has come about, he must have a statement of income and expense. This cannot be readily made up from the scattered facts as given, but a study of the transactions of the month will permit of such a statement. The amount of each item to appear on the statement of income and expense may be computed by adding the amounts of the individual transactions. This statement would be as follows:

A. L. EVANS

STATEMENT OF INCOME AND EXPENSE FOR MONTH ENDING
SEPTEMBER 30, 1930

Sales		\$3,750.00
Cost of Goods Sold:		
Purchases	\$8,000.00	
Less Ending Inventory	5,500.00	
Cost of Goods Sold		2,500.00
Gross Profit		1,250.00
Operating Expenses		
Rent	25.00	
Delivery Expense	80.00	
Sales Salaries	100.00	
Depreciation on Truck	7.00	
Depreciation on Furniture and Fixtures	2.00	
Bad Debts	9.00	
Total Operating Expenses		223.00
Net Profit		1,027.00
Nonoperating Income		
Purchase Discounts		50.00
Gross Income		1,077.00
Nonoperating Expense		
Sales Discounts		40.00
Net Income		<u>\$1,037.00</u>

Thus, the increase in proprietorship for the period is accounted for. The income statement shows that a profit of \$1,037 was made, and this amount, added to the \$5,000 originally invested, gives a total of \$6,037, which is the amount of the proprietorship shown in the balance sheet for September 30.

In practice it is not possible to determine the profit on each sale.—The method which we have presented in this chapter is valuable as indicating precisely the effect of the transactions upon the items of the balance sheet, but it cannot be followed in every respect in practice. One

difficulty which the student has probably thought of is that too much work would be involved if the attempt were made to determine the profit on each sale. Nor is it necessary to make such computations, for there is no need to prepare a balance sheet after each transaction. If this were to be attempted, most of the time of the employees would be taken up with the preparation of balance sheets which would be out of date before they were completed. Some other method of showing the sales must, therefore, be used which will require the least amount of effort and still show the desired information.

The method we have explained makes it difficult to prepare the statement of income and expense.—This second objection to this method is as important as the first. Although we have prepared an income statement which shows why the proprietorship has increased, the preparation was not easy because the information could not all be obtained in one place. To determine the amount of the sales, for example, it was necessary to scan the list of the transactions and select the items one by one. Not only would this be a laborious task for a business even of ordinary size, but the possibility of error would be very great. But unless the statement of income and expense is prepared, a great deal of information which, as we have already explained, is valuable to the management, is lost.

Accounting methods have been developed which overcome these two objections.—The changes in the assets and liabilities which do not involve any element of income or expense can be recorded as we have explained them. It is only the transactions involving changes in proprietorship that require any modification of our method. There is no difficulty, for example, in recording the payment of cash for a delivery truck. This is recorded, as we have explained

it, as an increase in the item Delivery Equipment, and a decrease in Cash. But the difficulty with the way we handled the proprietorship items was that we put various kinds of items under the head of changes in proprietorship. We put there, for example, profit on sales, purchase discounts, sales discounts, selling expenses, delivery expenses, and rent. Then when we wished to prepare a statement of income and expense, it was necessary to classify these items of widely varying nature. Now the method which is used in business is to separate and classify these items as the transactions occur. Those items reducing proprietorship are grouped together and classified, and those which increase it are likewise grouped together, by classes. At the end of the month or year, the items reducing proprietorship can be balanced against those increasing it, and only the net increase or decrease need be added or subtracted from proprietorship.

In order to show more clearly the use of this method, let us reconsider the transactions affecting the proprietorship of A. L. Evans. These are set forth in tabular form on the opposite page.

- It will be noted that the payment of an expense, such as rent, is shown on the left side as an increase in rent. As the rent is paid each month, it is shown in this same way, and at the end of the year the total would indicate the total rent paid during the year. This may then be deducted from proprietorship, or better, balanced against the income items and only the net increase or decrease in proprietorship added or deducted. The amount of the sales is likewise shown as Sales rather than as an adjustment of the proprietorship item. Other expense and income items also are kept separate according to the nature of the expense or income.

BUSINESS TRANSACTIONS AND THEIR EFFECT 97

SUMMARY OF TRANSACTIONS AFFECTING PROPRIETORSHIP OF A. L. EVANS

<i>Nature of Transaction</i>	<i>How Recorded</i>	
	<i>Left Side</i>	<i>Right Side</i>
Rent paid, \$25	Rent (increase) 25 Cash (decrease) 25	
Sale for cash, \$750	Cash (increase) 750	Sales (increase) 750
Paid accounts of \$500, receiving discount of \$10	Cash (decrease) 490	Accounts Payable (decrease) 500 Purchase Discount (increase) 10
Sale on account, \$3,000	Accounts Receivable (increase) 3,000	Sales (increase) 3,000
Collects cash, \$1,960 on accounts of \$2,000	Cash (increase) 1,960	
	Accounts Receivable (decrease) 2,000	
	Sales Discounts (increase) 40	
Pays accounts of \$2,000 receiving discount of \$40	Cash (decrease) 1,960	Accounts Payable (decrease) 2,000 Purchase Discounts (increase) 40
Pays salary of delivery boy, \$80 and of sales clerk, \$100	Cash (decrease) 180	
	Delivery expense (increase) 80	
	Sales Salaries (increase) 100	
Makes allowance for possible loss on bad debts, \$9	Bad Debts (increase) 9	Allowance for Bad Debts (increase) 9
Makes allowance for decrease in value of truck, \$7	Depreciation on truck (increase) 7	Allowance for depreciation on truck (increase) 7
Makes allowance for decrease in value of Furniture and Fixtures \$2	Depreciation on Furniture and Fixtures (increase) 2	Allowance for depreciation on Furniture and Fixtures (increase) 2

At the end of the month, after recording the increases and decreases as we have explained them, Evans copies from his records the amounts of the assets on hand, the

liabilities owed, the proprietorship, and the totals of the expenses and incomes. Since the expenses and incomes have been recorded separately and have not been added to or subtracted from the proprietorship, the proprietorship will stand at \$5,000, the amount of the original investment. Since also Evans has followed the principle of the accounting equation and has not added to or subtracted from one side without making off-setting additions or subtractions, the totals of the two sides will be equal. These totals will be as follows:

<i>Left Side</i>		<i>Right Side</i>	
<i>Name of Item</i>	<i>Amount</i>	<i>Name of Item</i>	<i>Amount</i>
Cash	2,055	Accounts Payable	2,200
Accounts Receivable	1,000	Notes Payable	1,000
Furniture and Fixtures	200	A. L. Evans, Capital	5,000
Delivery Equipment	500	Sales	3,750
Goods Purchased	8,000	Purchase Discounts	50
Rent	25	Allowance for Bad Debt Losses	9
Delivery Expense	80		
Sales Salaries	100	Allowance for Depreciation on	
Sales Discounts	40	Truck	7
Bad Debts	9		
Depreciation on Truck	7	Allowance for Depreciation on	
Depreciation on Furniture and		Furniture and Fixtures	2
Fixtures	2		
Total	12,018	Total	12,018

With the above figures before him, Evans now attempts to make out his financial statement. Before he can do this, however, he must determine the value of the merchandise on hand at the end of the month. Since he has not attempted to record the cost value of each article sold, the only way for him to determine the value of the goods on hand is to take a physical inventory. Let us assume that he does this and finds the value to be \$5,500, the figure which we arrived at before. The record of purchases shows that goods to the total value of \$8,000 were purchased during the month. Since the inventory shows that the goods still

on hand are worth \$5,500, and since in this case there was no beginning inventory, the cost of goods sold must be the difference between the purchases and the ending inventory, or \$2,500. The gross profit is then determined by subtracting the cost of goods sold from the sales. These expenses are totaled and the amount is subtracted to find net profit. Allowance is then made for the nonoperating income and nonoperating expense. In this way the amount of the net income is computed. This amount is then added to the proprietorship. The statement of income and expense in the proper form is easily prepared from the records showing the total of each of the income and expense items.

The amounts of each of the asset and liability items had already been determined. Since now the amount of the proprietorship at the end of the month is known, the balance sheet can be prepared with the assurance that, if no mistakes have been made, the two sides will show the same totals, or, in other words, will balance.

QUESTIONS FOR DISCUSSION

1. What is a business transaction?
2. Why is the accounting equation always a true statement of the financial condition of a business? How would the equation be stated for an insolvent concern, that is, for a business the liabilities of which are in excess of its assets?
3. Give examples of transactions which affect only the asset side of the balance sheet. Of transactions which affect only the liability side. Of transactions which affect both sides.
4. State the effect of the following transactions upon the balance sheet:
 - (a) Purchase of merchandise on account
 - (b) Purchase of merchandise for cash
 - (c) Purchase of delivery truck for cash
 - (d) Purchase of delivery truck by giving a note
 - (e) Purchase of delivery truck for part cash and note for the balance

- (f) Payment of an account payable
- (g) Giving a note in settlement of an account payable
- (h) Receipt of cash from a customer in payment of his account
- (i) Receipt of cash from a customer in payment of a note
- (j) Receipt of a note from a customer in settlement of his account
- (k) Sale of merchandise for cash
- (l) Sale of merchandise on note
- (m) Payment of sales salaries in cash
- (n) Payment of rent in cash

PROBLEMS

1. Rule a page with a vertical line down the middle. Enter the results of the following transactions on the left side or right side of the line, according to whether the item affected is on the left or right side of the account form of balance sheet. Number each transaction as entered. Thus the first transaction would be entered:

<i>Left Side</i>		<i>Right Side</i>	
(a) Cash +	\$5,000	F. E. Young, Capital +	\$5,000
(a) F. E. Young invests \$5,000 in the grocery business			
(b) Buys furniture and fixtures on account for \$200			
(c) Buys merchandise on account for \$5,000			
(d) Sells merchandise on account for \$1,500 (Show as sales on right side)			
(e) Pays \$200 on account for furniture and fixtures previously purchased.			
(f) Receives \$300 from customers on account			
(g) Sells \$500 and customer gives a note in payment			
(h) Buys a delivery truck for \$600. Pays \$100 in cash and gives his note for the balance			
(i) Buys additional merchandise on account, \$4,000			
(j) Buys gas and oil for delivery truck, \$20 (Show as delivery expense on left side)			
(k) Withdraws for private use \$30 (Show as decrease in proprietor's account)			
(l) Pays sales clerk's salary, \$100			
(m) Pays accounts to amount of \$2,000 for merchandise previously purchased			

- (n) Pays rent, \$50
- (o) Sells merchandise for cash, \$2,000
- (p) Withdraws for private use, \$200
- (q) Pays salary of truck driver, \$80
- (r) Pays office expenses, \$80

2. From the data arranged for the preceding problem, determine the amount of each asset on hand at the end of the month and the amount of each kind of liability. The difference will be the proprietorship at the end of the month. Show in balance sheet form. The amount of the inventory of merchandise on hand at the end of the month was \$6,000. Prepare a statement of income and expense, showing operating expenses classified as selling and administrative. Deduct the amount of the proprietor's drawings from the net profit to determine the increase or decrease in proprietorship for the month. Compare with the amount of the proprietorship shown on the balance sheet.

3. O. M. Jones performed the following transactions:

(a) Purchases merchandise for cash	\$200
(b) Sells merchandise for cash	50
(c) Pays typist for services	50
(d) Receives cash from M. A. Adams	30
(e) Buys on account, from H. E. James	40
(f) Pays for services of sales clerk	25
(g) Sells on account to R. E. Allen	20
(h) Purchases merchandise on account from A. B. Hill	30

Record these transactions according to the method in problem 1.

4. During the month of January R. B. Hicks performs the following transactions. The numbers are dates of the months:

1 He bought of J. O. Lincoln, on account, merchandise,	250
2 Rent paid for month,	75
3 He paid the following expenses:	
Sales Salaries	140
Telephone	5
Light	10
Salary of typist	50
Postage	3

4 Purchased from R. E. Moss, on account, merchandise,	324
5 Sold merchandise for cash to A. Andrews	52
6 Sold merchandise on account to A. Andrews	48
7 Purchased from Field and Fowler, on account, merchandise,	280
8 Received note of, from A. P. House, to apply on account,	25
12 Purchased office furniture for cash,	125
15 Paid for advertising,	10
17 Paid for buying expenses,	15
20 Received from Hobart Hotel, to apply on account,	25
20 Gave a note to W. I. Bishop for Mdse. pur- chased,	30
25 Purchased on account from Mercantile Co., merchandise,	240
28 Paid salary to delivery driver,	25
30 Paid Baker Coal Co.,	14
30 Paid advertising,	10

Record the transactions at the left and right of a line drawn down the middle of a page in the manner of recording the transactions of problems 1 and 3.

REFERENCES FOR FURTHER STUDY

EFFECT OF TRANSACTIONS UPON THE BASIC ELEMENTS: Scovill, *Elementary Accounting*, Part One, pp. 26-50

CHAPTER VII

ACCOUNTING RECORDS

PURPOSES OF THIS CHAPTER

1. To show the reason for using vouchers, journals, and ledgers
 2. To show how the various accounting records are interrelated
-

It would hardly need to be said that it is impossible for any business man to keep in mind for a year or other long period all the transactions which affect his business and which must be taken into account in drawing up such reports as the balance sheet and the statement of income and expense. A system of records has been developed to record the effects of transactions upon the various items which are to be recorded in the reports as assets, liabilities, proprietorship, income, and expense. These records help greatly in preparing the reports. They are called the *accounting records*. The exact form of these records varies somewhat from business to business, but many elements and features are the same for all businesses. These records and the method of their operation are to be explained in detail in the chapters which follow, but it is desirable to see, at this time, what the general structure of the accounting system is, and the relation of each kind of record to the other kinds. Unless the student does see the system as a whole, he is likely to fail to understand many of the details. The records used in collecting the information for the reports, that is, in recording the effects of business transactions,

are: (1) business papers and vouchers, (2) books of original entry or journals, and (3) accounts.

The first record of a change in the items is made on a business paper, or voucher.—When a business transaction is completed, some memorandum of it is usually made at once. For example, when a credit sale is made, a sales ticket or invoice, is prepared giving the name of the customer, the articles purchased, the price of each article, and other necessary information. If the sale is for cash, a sales ticket may be prepared or the sale may be merely rung up in the cash register. In the latter case the total for the day is noted on a paper called a voucher, from which it may be transcribed to the accounting records. If a purchase is made, a purchase invoice is received from the seller. When checks are written in payment of invoices or of expenses, a record is made on the check stub. When cash is deposited in the bank, a deposit slip is filled out and receipted by the cashier of the bank. Thus with most business transactions, some business paper is prepared as a part of the regular procedure. When a business paper is not prepared at the time of the transaction, it is customary to prepare later some memorandum such as that mentioned in connection with cash sales which are first rung up in the cash register. Such a memorandum is spoken of as a *voucher*.

The next step in the compilation of the accounting information is to record the changes in a journal.—The business transactions, which cause changes in the items of the reports, are recorded, in the order in which they occur, in a book called the *Journal*. Because the journal is the first book in which the changes are recorded, it is frequently called a book of original entry. This is the book which bookkeepers sometimes speak of as the day book. In this book, of which there are several kinds, the effect of the transaction

upon the items of the accounting reports is analyzed. For example, a cash sale is entered as an increase in Cash; and since all sales must be included in the total of the sales as shown on the statement of income and expense, it is necessary to show this cash sale in such a way that it will be added with the other sales to obtain the figure for the total sales of the period. In the same way, if cash is received from a customer in payment of his account, the entry in the journal must show that cash has been increased by the amount of the remittance received; and since the total amount due from customers is decreased by the same amount, the entry must also show that Accounts Receivable has been decreased.

The simplest form of the journal is shown below, the entry being the record of cash received from a customer.

JOURNAL OF J. W. MARTIN

MARCH 15, 1930

Cash	5,000	
Accounts Receivable		5,000
Cash received from Ellis Jones in payment of his account		

The change in each item of the reports is next transferred to the account.—The third step in recording the effect of the transaction is to assemble all of the transactions affecting any one item, such as cash, the total amount of the increases being offset against the total of the decreases to determine the amount of cash which should be on hand at the end of the day, the month, or the year. This sorting is done by having one page in a book, called the *Ledger*, on which all of the information relating to any one item is collected. Each page is divided into two sides, the increases being entered on one side and the decreases on the other. The amount, say of an asset, on hand at the beginning of the

period is also shown on this page on the same side on which the increases are recorded. The increases are thus added to the amount on hand at the beginning, and the difference between the two sides indicates the amount which should be on hand at the end of the accounting period. There is an account for each item that is to appear on the balance sheet and the statement of income and expense.

Data relative to income and expense items are assembled by means of accounts which are like the accounts used to assemble the information for the balance sheet items. The amounts of the items shown on the statement of income and expense differ from the amounts of the balance sheet items, however, in that the income and expense items are the totals for the period covered by the statement of income and expense, whereas the amounts shown on the balance sheet are balances as of the end of the period. The amount of the sales, for example, is not the amount of the sales for any particular moment of time, but is the total for the year or month or other period of the report. To determine the amount of the sales, it is necessary to add the amounts of all sales whether made for cash or on credit. The amount of any expense, such as sales salaries, represents the total for the period; and the amount is determined by adding the total expense for the months, or weeks, or days of the period.

Since income and expense items represent totals and not balances, it is to be expected that most of the entries in an expense or income account will be on only one side of the account. As expenses are incurred or income is received, the items are recorded in some journal and then transferred to the proper account, all expense or all income of the same kind being recorded in the particular account kept for that one item. The amounts are entered in the account one

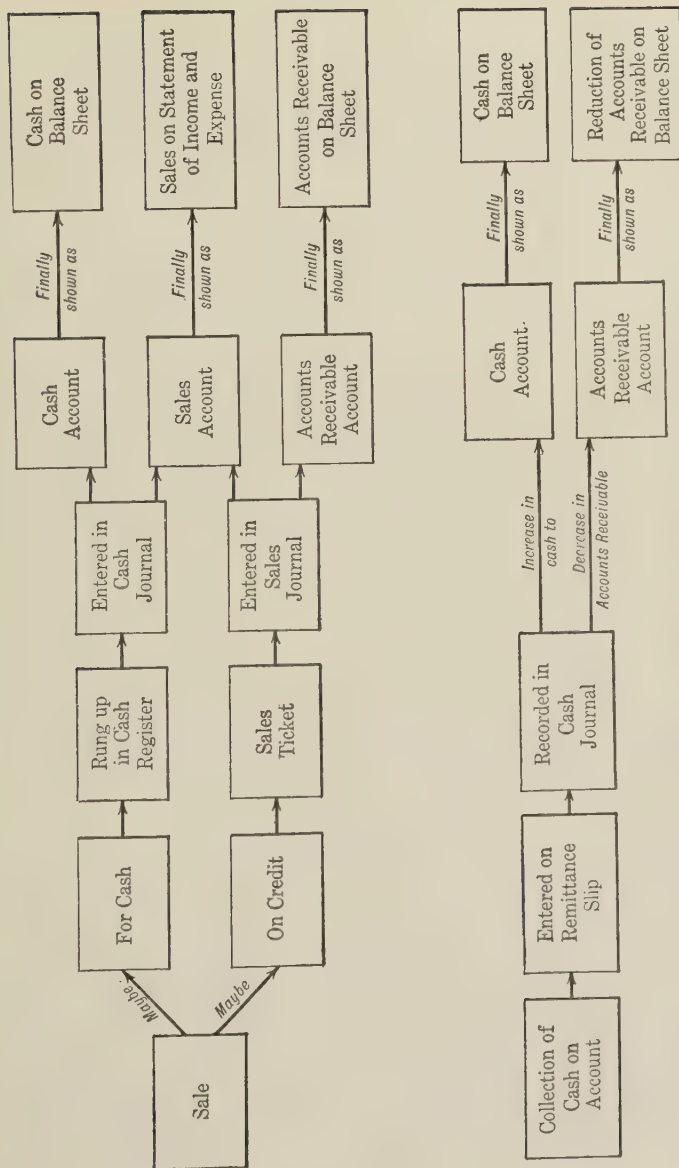


Figure 1.—HOW ACCOUNTING INFORMATION IS COLLECTED

under the other in order that the total for the period may be easily determined.

When the information, relative to each item of the accounting reports, has been assembled in the accounts at the close of the accounting period, the reports may be prepared from the accounts. The steps followed in gathering the information are indicated in the chart on page 107.

In the outline of the accounting records presented in the foregoing paragraphs, the steps of the process of collecting and recording the information were listed in the order in which they are carried out by the bookkeeper. In our detailed discussion of these steps in the pages which follow, however, the steps are considered in the reverse order. In other words, the accounts will be considered before the journals. The reason for this procedure is that the ledger accounts are closely related to the accounting reports already discussed, and the next logical step is to determine how the accounts are designed to show the information necessary for the preparation of the reports. The next step in the discussion will then be a consideration of the sources from which the information for the accounts is obtained. This investigation will lead us to a study of the journals.

QUESTIONS FOR DISCUSSION

1. What is the purpose of accounting records? List them and state the purpose of each.
2. What are the various kinds of business papers?
3. What information is shown on the bank deposit slip? The sales ticket? The purchase invoice? The check stub?
4. Why is the journal sometimes called the book of original entry? Why is it sometimes called the day book?
5. What is the difference between the arrangement of the information recorded in the journal and the arrangement of the same information in the ledger?

6. How is information arranged in the ledger? Why should there be an account for each item which is to appear on the accounting reports?

7. How do balance sheet items differ from expense and income items? What peculiarity of expense and income accounts results from this difference?

REFERENCES FOR FURTHER STUDY

TECHNIQUE OF RECORDING BUSINESS TRANSACTIONS: Folts and Stillman,
Interpretive Accounting, pp. 218-228

CHAPTER VIII

THE ACCOUNT AS A DEVICE FOR CLASSIFYING BUSINESS TRANSACTIONS

PURPOSES OF THIS CHAPTER

1. To show how business transactions are classified and recorded in the accounts
 2. To explain the principle known in accounting as debit and credit
-

In this chapter we begin a discussion of the method of recording the effects of business transactions in one of the important accounting records, namely, the *account*. The accounts are used to assemble all of the increases and decreases in each of the items of the balance sheet and in the statement of income and expense. To illustrate the use of the account we shall show how the changes resulting from business transactions may be entered directly in the accounts. It will be understood from what was said in the preceding chapter, however, that each transaction has already been entered in a journal and is now merely transcribed from the journal to the account.

The effects of business transactions upon the items of the accounting reports are classified by means of accounts.—The account is merely a device for bringing together, in one place, all of the increases and decreases in any one item of the balance sheet or statement of income and expense in order that the correct amount of that item to be placed on the financial statement may be determined. In the case

of the asset accounts, the purpose is to determine the amount of each type of assets owned by the business at the date of the balance sheet. In the case of the liability accounts, the purpose is to determine the amount owed at the date of the balance sheet. In the case of the expense and income accounts, the purpose is to determine the total of each kind of expense and each kind of income for the period covered by the statement of income and expense. Since the information used in the preparation of the financial statements comes from the accounts, it follows that there must be an account for each item on the balance sheet and the statement of income and expense.

The form of the account is that of the letter T, with increases shown on one side and decreases on the other. The name of the asset or other item for which the increases and decreases are to be shown in the particular account is written at the top. Usually there is one account to the page. Using the cash account as an example, the method of arranging the information may be illustrated as follows:

CASH

Increases in cash are entered on the left side	Decreases in cash are entered on the right side.
---	---

The reason why increases in cash are shown on the left side is that cash is shown on the left side of the balance sheet along with the other assets, and if increases in cash are also shown on the left side of the account there is less danger of mistake in the preparation of the balance sheet. The same consideration applies to all the other assets. But since the liabilities and the proprietorship are shown on the right side of the balance sheet the rule is reversed so far as they are concerned; increases in the liability and proprietorship items are shown on the right side while

THE ACCOUNT AS A DEVICE

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ALLOWANCE FOR BAD DEBTS

1930	
Sept. 30	Allowance for month 9.00

FURNITURE AND FIXTURES

1930	
Sept. 1	Showcase, typewriter 200.00

ALLOWANCE FOR DEPRECIATION OF FURNITURE AND FIXTURES

1930	
Sept. 30	Allowance for month 2.00

DELIVERY EQUIPMENT

1930	
Sept. 2	Truck 500.00

ALLOWANCE FOR DEPRECIATION OF DELIVERY EQUIPMENT

1930	
Sept. 30	Allowance for month 7.00

ACCOUNTS PAYABLE

1930		1930	
Sept. 10	Paid cash 3,000.00	Sept. 1	Showcase, etc. 200.00
15	Paid cash 500.00	5	Mdse. on acct. 4,000.00
30	Paid cash 2,000.00	21	Mdse. on acct. 3,500.00
30	Balance 2,200.00		
	<u>7,700.00</u>		<u>7,700.00</u>
		Dec. 1	Balance 2,200.00

NOTES PAYABLE

1930	
Sept. 30	Note to bank 1,000.00

A. L. EVANS, CAPITAL

1930	
Sept. 1	Cash investment 5,000.00

SALES

1930	
Sept. 10	Cash sales 750.00
16	Sales on account 3,000.00

PURCHASES

1930		
Sept. 5	Mdse. on account	4,000.00
21	For cash and on acct.	4,000.00

RENT

1930		
Sept. 1	Cash	25.00

DELIVERY EXPENSE

1930		
Sept. 30	Driver's salary	80.00

SALES SALARIES

1930		
Sept. 30	Clerk's salary	100.00

DEPRECIATION ON TRUCK

1930		
Sept. 30	Depreciation for month	7.00

DEPRECIATION ON FURNITURE AND FIXTURES

1930		
Sept. 30	Depreciation for month	2.00

LOSSES ON BAD DEBTS

1930		
Sept. 30	Estimated losses for month	9.00

PURCHASES DISCOUNTS

1930		
Sept. 15	Mdse. accts. paid	10.00
30	Mdse. accts. paid	40.00

SALES DISCOUNTS

1930		
Sept. 20	Allowed on accts.	40.00

Several important facts must be pointed out in connection with the accounts illustrated in this chapter. First of all, it will be noticed that the merchandise purchases are recorded in an account called Purchases. If there had been an inventory of goods on hand at the beginning of the month, this would have been shown on the left side of an account called Merchandise Inventory, the merchandise thus being shown in the two accounts. This is desirable in order that the statement of income and expense may show beginning inventory and purchases, the two together constituting the total goods on hand during the month.

Secondly, it will be noticed that some of the accounts showing balance sheet items, hereafter to be spoken of as balance sheet accounts, have been *balanced*. To balance an account we add enough to the smaller of the two sides to make the total of that side equal the total of the other side, entering the totals, ruling the account in the manner illustrated, and bringing down on the opposite side the same amount as was added to the smaller side. The principle followed in balancing an account is very simple. It may be explained in this way: We have placed on the left side of the account, say the cash account, the amounts of all the cash received during the month. We have placed on the right side the amounts of all cash paid out. The difference between the totals of the two sides is the balance of the cash on hand at the end of the month. We could show this balance by subtracting the total of the right side from the total of the left side, and if we did so, we would show that after receiving \$8,710 during the month, and paying out \$6,655, there was left to Evans' credit \$2,055. Instead of doing that, however, we make the account look much better if we merely add the amount of cash on hand at the close of the month to the various sums paid out. We thus get

the total on the right side equal to the total on the left side. The totals are recorded at the bottom of each column and double lines are drawn under the figures to indicate that the two sides on the page are equal and that the bookkeeper need no longer concern himself with anything above the two lines. On the left side and on the next line below, the same figure which was added on the right side, \$2,055, is entered. This indicates that the business had this amount of cash at the opening of the store for business on the morning of October 1. The word "balance" is written in the explanation column. The reason the balance on hand on the morning of October 1 is placed on the left side is that there is to be added to it the sums received at various times during the month of October. The same method is followed in balancing other asset accounts.

The method of balancing the liability accounts should also be noted. Accounts payable to the amount of \$7,700 were incurred during the month. Of these accounts, items amounting to \$5,500 have been paid, leaving a balance of \$2,200. This balance is written in the account on the left side below the entries for the amounts paid. The amounts paid plus the amounts still owed equal the total indebtedness of the period. The two sides therefore are in balance. The account is ruled, and the balance owed on December 1 is entered on the next line on the right side. Other liability accounts are balanced in the same way. Where there has been only one entry in an account during the month, it is not necessary that the account be ruled and balanced.

The student will notice that there are no dollar signs (\$) in the accounts. They are not necessary because the ruling of the page indicates dollars and cents. For the same reason, decimal points are ordinarily not used in the accounts though they are needed in the financial reports.

The left side of the account is spoken of as the debit side, the right side as the credit side.—It may be easier to keep the meaning of these terms in mind if their origin is known. It is said what when business men first began to keep accounts, their main concern was to keep a record of the amounts due from customers. Therefore when a customer made a purchase, the amount of the purchase was written on a page, and quite naturally on the left side. Thus the left side was used to record sums due, and the word *debit*, coming from the Latin word meaning “he owes,” came to be applied to the left side. When the customer paid his account, the amount he paid was written on the right side opposite the record of his purchase. Later when it became necessary to keep a record of the amounts due to creditors for goods purchased, it was necessary to make some distinction between these records and the records of sums due from customers. The practice gradually developed of placing these amounts on the right side. Thus the right side came to be known as the *credit* side, from the Latin word meaning “he trusts” or “he credits.” At the present time, these words have lost the narrow meaning which they once had, and the word *debit* merely means the left side of the account, while *credit* means right side.

The rules for debiting and crediting accounts, in so far as they apply to the balance sheet accounts, are summarized as follows:

Debit

Increase of assets
Decrease of liabilities
Decrease of proprietorship

Credit

Decrease of assets
Increase of liabilities
Increase of proprietorship

We have previously explained that expenses represent decreases in proprietorship, while income represents an

increase in proprietorship, these items being placed temporarily in separate accounts in order that the owners of the business may know the reasons for the increase or decrease in proprietorship. It follows that the expenses are debits just as any other decrease in proprietorship is a debit, while income received, being really an increase in proprietorship, is a credit.

The nature of the entries in the sales account should be mentioned. The student has already learned that the sale in reality represents two things; first, it represents a decrease in the asset merchandise in so far as it represents the cost of the goods sold; and, second, it represents an increase in proprietorship in so far as it represents profit. Since both decreases in assets and increases in proprietorship are credit items, the sale naturally is a credit. The amount of the sale is, therefore, shown on the credit side of the sales account. Sales returns and sales allowances are decreases in the amount of the sales and, therefore, are shown on the debit side of their respective accounts.

Business transactions ordinarily do not result in credits to the expense accounts or debits to the income accounts. However, if too large an amount should be debited to an expense account, correction could be made by a credit. Likewise, an erroneous credit entry to an income account may be corrected by a debit entry to that same account in the amount of the error. Occasionally, refunds give rise to credits in expense accounts or debits to income accounts. The rules relative to the debits and credits of the expense and income accounts may now be summarized.

Debit

Increase of expense
Decrease of income

Credit

Decrease of expense
Increase of income

Graphically, the principles of debit and credit may be summarized as follows:

BALANCE SHEET ITEMS:

Assets		Liabilities		Proprietorship	
+	-	-	+	-	+

INCOME AND EXPENSE ITEMS

Expense		Income	
+	-	-	+

The number of accounts to be kept depends upon the nature and size of the business.—It has already been said that the form of the balance sheet and of the statement of income and expense will vary somewhat with the business, and that there should be an account for each item of the financial statements. It can, therefore, be seen that the number of accounts to be kept will vary with the business. This fact may be further illustrated by reference to the statements of A. L. Evans. The records of Evans' business, like those of every other business, require a cash account, since the business must receive and pay out cash.¹ Since Evans sells some merchandise on account he must have an Accounts Receivable account, and also a personal account with each of his customers in order that he may know the amount each of his customers owes. Other asset and

¹ This of course does not always mean a formal account for cash in the ledger. This point will be taken up in a later chapter.

liability accounts will be kept according to the assets owned or the liabilities owed. Expense and income accounts will likewise vary with different businesses according to the nature of their expenses and their incomes and the amount of detailed information about expenses and incomes which the managers of the business wish to have.

The accounts are kept in a book called the *Ledger*. This may be a bound book, but frequently it is loose-leaf, thus permitting the pages which have been filled to be removed without disturbing the rest of the book. The loose-leaf ledger also makes it possible to insert new accounts at the proper place in the ledger.

Ledger accounts are designated by number as well as by name.—If numbers are used consistently and in a logical manner to designate the items of the financial statements, bookkeepers and others who have occasion to refer to such items can use the numbers instead of names. This saves time and is less likely to cause confusion, as the use of a name frequently leads to misunderstanding as to just which item is meant. The following classification indicates a logical method of designating the items by number. It will be observed that each sub-heading is numbered merely by adding one digit to the number of the main group. Such numbers are used only in the accounts and other accounting records; they are not used in the balance sheet or the statement of income and expense.

1. *Assets*

11 Current assets

111 Cash

112 Accounts Receivable

113 Allowance for Losses on Doubtful Accounts

114 Notes Receivable

115 Inventory

- 12 Deferred Charges
 - 121 Prepaid Insurance
 - 122 Supplies
- 13 Investments
 - 131 Liberty Bonds
- 14 Fixed Assets
 - 141 Furniture and Fixtures
 - 142 Allowance for Depreciation on Furniture and Fixtures
 - 143 Building
 - 144 Allowance for Depreciation on Building
 - 145 Land
- 15 Intangible Assets
 - 151 Trademarks
 - 152 Patents

2. *Liabilities*

- 21 Current Liabilities
 - 211 Accounts Payable
 - 212 Notes Payable
 - 213 Taxes Accrued but not Paid
- 22 Fixed Liabilities
 - 221 Mortgage Payable

3. *Proprietorship*

- 31 Capital Stock
- 32 Surplus

4. *Income*

- 41 Income from Operations
 - 411 Sales
 - 412 Sales Returns
 - 413 Sales Allowances
- 42 Nonoperating Income
 - 421 Interest Income
 - 422 Rent Income
 - 423 Discounts Received on Purchases

5. Expenses

51 Operating Expenses

511 Selling Expenses

5111 Advertising

5112 Salaries of Sales Clerks

5113 Delivery Expenses

5114 Miscellaneous Selling Expenses

512 Administrative Expenses

5121 Stationery and Postage

5122 Telephone and Telegraph

5123 Heat and Light

5124 Insurance

5125 Office Salaries

5126 Officers' Salaries

5127 Traveling Expenses of Buyers

5128 Miscellaneous Administrative Expenses

52 Nonoperating Expenses

521 Interest on Notes Payable

522 Interest on Mortgage

523 Discounts Allowed on Sales

QUESTIONS FOR DISCUSSION

1. In installing a set of books in a business, how would you determine the number and nature of accounts to be used?
2. What are some of the accounts which you would need in a banking business? A law office? Garage business? Farming?
3. What is a T account? Are you likely to make use of both sides of a T account? An Account Receivable? Land? Mortgage Payable?
4. What is meant by debit and credit?
5. What information is shown in an account?
6. Why is proprietorship shown on the credit side? Is it a liability? If so, in what sense?
7. Why is an expense account debited when an expense is incurred? Isn't expense a value parted with and hence must be credited? How do you explain that the latter is incorrect?
8. Show by two illustrations the connection between a business transaction and the account.

9. What is the object of balancing an account? What use do we make of the balance?

10. If you wanted to determine whether you had the balance on the correct side of an account, what question would you ask yourself?

11. If transactions are recorded properly in the accounts, what relationship should there be between the sum of the debits and the sum of the credits?

12. What principles would you follow in determining the titles you should give the accounts?

PROBLEMS

1. The ledger of O. M. Jones shows the following accounts:

O. M. Jones, Proprietorship	3,500
Building	5,000
Cash	2,000
Purchases	8,000
Sales	10,000
Selling Expense	600
Land	7,000
Advertising Expense	150
Notes Receivable	300
Delivery Expense	400
Accounts Receivable	4,000
Merchandise Inventory	3,500
Delivery Equipment	700
Accounts Payable	2,000
Notes Payable	500
Administrative Expense	2,400

Which of these should show debit and which credit balances?

2. A fellow student tells you that he does not understand how to enter assets and liabilities in the accounts. Write a short formal report to him stating the method in your own words and explaining how it should be done.

3. You are directed by your employer, E. T. Sells, to make up T accounts and place therein the following information as he dictates it to you.

Cash	1,000	Merchandise Inventory	4,000
Notes Payable	800	Notes Receivable	100
Accounts Receivable	5,100	Furniture and Fixtures	600
Office Equipment	600	Proprietorship	5,400
Accounts Payable	5,200		

Arrange the accounts as you will find them in your balance sheet. Allow six or seven lines for each account so that you can record later transactions.

4. During the day the following transactions take place:

Received cash on account	\$400
Received note to apply on account	100
Paid on account	200
Paid for furniture and fixtures	400
Received to pay off a note	100
Made an additional investment of	800
Purchases a typewriter for	30
Received from a customer to pay on account	400
Paid creditors on account	300
Paid a note of	80

Record these transactions in the accounts set up in problem 3. Preserve this exercise for future use.

5. On January 1, 1930, F. O. Pennell had accounts in his ledger with the following balances: Cash, \$1,000; Notes Payable, \$500; O. P. Wilson, debit balance, \$200; Delivery Equipment, \$250; F. E. Nelson, debit balance, \$300; Notes Receivable, \$400; Nelson and Co., credit balance, \$650; F. O. Pennell, \$1,000.

The following transactions occurred during the month:

- Jan. 7 Received \$150 cash from F. E. Nelson to apply on account.
- 12 Borrowed \$250 from the bank and gave a note.
- 17 Nelson and Co., paid \$50 in cash.
- 19 F. O. Pennell withdrew \$100.
- 25 Received from O. P. Wilson \$100 and a note of \$100, in full of his account.

Open the accounts of Mr. Pennell, entering the balances as of January 1. Record the transactions for January, giving the dates in each case.

6. Refer to problem 4 of Chapter VI and classify the increases and decreases in the various items by means of a system of accounts. Open whatever accounts you consider necessary.

REFERENCES FOR FURTHER STUDY

- THE ACCOUNT: Kester, *Accounting Theory and Practice*, 3d. ed., Vol. I, pp. 59-74
- PRIMARY USE OF ACCOUNTS: Scovill, *Elementary Accounting*, Part One, pp. 53-70
- THE ACCOUNT; CLASSIFICATION; RULES FOR CONSTRUCTION OF ACCOUNTS: McCarty and Amidon, *Survey Course in Accounting*, pp. 66-70
- THE ACCOUNT AS A MEANS OF CLASSIFYING INFORMATION: Hodge and McKinsey, *Principles of Accounting*, pp. 53-64
- THE PHILOSOPHY OF DOUBLE ENTRY: Folts and Stillman, *Interpretive Accounting*, pp. 209-216

CHAPTER IX

THE INFORMATION RECORDED IN EACH OF THE ACCOUNTS

PURPOSES OF THIS CHAPTER

1. To explain the types of transactions which cause increases and decreases in each of the balance sheet items
 2. To explain the types of transactions which cause increases and decreases in each item of income and expense
-

In the preceding chapter, we found that the account is a useful device for classifying business transactions. The account serves to assemble all the transactions that affect any one item of the financial statement, permitting the increases to be added and offset against the decreases. Thus, by means of the account, the net amount of any item to be shown in the financial statements at the end of the accounting period is determined. In the present chapter, we shall consider further the types of transactions that result in increases and decreases in each item. The accounts will be considered in the order in which the corresponding items appear on the reports, balance sheet items being considered first.

The Cash account is debited with all cash received and credited with all cash paid out.—The offsetting credit to a debit in the cash account may be in any one of a number of accounts. For cash received on cash sales, the credit is to the Sales account. If cash is received from a customer in payment of an account, the credit is to the Accounts Receivable account, notation being made in the latter account

as to the identity of the customer who made the payment. Cash received in payment of notes is credited to Notes Receivable.

In the same way, credits to the Cash account for cash paid out may be offset by debits to any of the expense accounts, to Notes Payable, if payment is made on a note, or to Accounts Payable, if payment is made on account. There are many other possible accounts which may be debited. The student must think through each transaction to determine the proper account to be debited or credited, though he will soon learn to do this without much effort.

The Accounts Receivable account is debited with all charges made against customers on open account and is credited with all payments received or allowances granted.—The debits in Accounts Receivable usually arise from sales, the offsetting credit, therefore, being in the Sales account. Debits to Accounts Receivable may, however, arise in other ways. For example, if a customer refuses to make payment on a note which he has given, and legal expenses are incurred in connection with the attempt to make collection, these expenses should be charged to the customer in the Accounts Receivable account. The Accounts Receivable account is credited with the cash payments made by the customer, with notes which he gives, and with allowances for returns of merchandise and for defective goods. The entries made in this account are summarized below.

ACCOUNTS RECEIVABLE

Debit:

With all sales made on open account, the offsetting credit being in the Sales account.

Credit:

With all cash payments made by customers, the offsetting debit being in the Cash account and in the Sales Discount accounts; with all sales returns, debiting Sales Returns; with sales allowances, debiting Sales Allowances; with notes given, debiting Notes Receivable.

The Notes Receivable account is debited with all notes received and credited with all payments made on the notes.—When a customer gives a note either for merchandise purchased or in payment of sums due on open account for merchandise previously purchased, the Notes Receivable account is debited with the face of the note. If a customer pays all or a part of any note, the amount paid on the principal of the note is credited to Notes Receivable. This account should not be credited, however, on account of any sums received as interest on notes.

NOTES RECEIVABLE

Debit:

With the face of all notes received when goods are sold, the credit being to the Sales account; with all notes received from customers in payment on their accounts, the offsetting credit being to Accounts Receivable

Credit:

With all payments made by customers on their notes, the debit being to the Cash account.

Merchandise Inventory account is debited with the amount of the ending inventory, the opening inventory being transferred to the purchases account.—The method of recording the ending inventory is frequently found to be one of the most difficult points with which the beginning student has to deal. It may best be understood by reference to the statement of income and expense. In that statement, as the student has learned, the beginning inventory is added to the purchases made during the period. From this total, the ending inventory is subtracted to obtain the cost of goods sold.

Entries are made in the accounts so as to show the same facts which the statement of income and expense shows. The beginning inventory is first transferred to the Purchases account by debiting Purchases and crediting the Inventory account. This clears the Inventory account and at the

same time shows on the debit side of the Purchases account the total goods on hand during the period. The ending inventory is then entered as a debit to Inventory and a credit to Purchases.

By means of these entries, the Inventory account is made to show the amount of the ending inventory which is to be shown on the balance sheet. The entries in the Inventory account are shown below in tabular form.

MERCHANDISE INVENTORY

Debit:	Credit:
With the amount of the ending inventory. The offsetting credit is to Purchases	With the amount of the beginning inventory. The offsetting debit is to Purchases.

The fixed asset accounts are debited with the cost of the assets acquired and are credited with the cost of assets disposed of.—It must be emphasized that since the various accounts showing the value of fixed assets are debited with the cost of the assets, they must be credited with the cost when any such assets are disposed of. The mistake which beginning students frequently make is to credit the asset account with the amount for which the asset is sold. This point requires explanation.

In Chapter VI, it was explained that A. L. Evans had bought, for the use of his business, a truck which he estimated would depreciate at the rate of about \$7 per month. Evans arrived at this figure on the assumption that the truck would last about five years and that, at the end of that time, it could be sold or traded in for about \$80. Subtracting the \$80, the estimated scrap value, from the \$500 cost of a new truck, Evans decided that the truck would decrease in value approximately \$420 during the five years, or at the rate of \$84 per year. This decrease in value he recognized as an expense of the business. After he has

made entries recording the decrease in value for these five years, the Delivery Equipment account and the Allowance for Depreciation on Delivery Equipment account would stand as follows:

DELIVERY EQUIPMENT

First Year:

Date of purchase

Cost of Truck

500.00

ALLOWANCE FOR DEPRECIATION ON DELIVERY EQUIPMENT

First year depreciation	84.00
Second year depreciation	84.00
Third year depreciation	84.00
Fourth year depreciation	84.00
Fifth year depreciation	84.00

As a result of the entries, the value of the truck to be shown on the balance sheet has been decreased to \$80. Suppose now that Evans sells the truck for \$80. The entries to be made in the account would be a debit to cash for the amount of cash received, \$80, a debit to Allowance for Depreciation on Delivery Equipment, \$420, a credit to Delivery Equipment for the cost of the truck, \$500. As a result of these entries, the records of the truck are closed out, which is as it should be since the truck has been disposed of.

The entries to be made in the fixed asset accounts are summarized as follows, the Delivery Equipment account still being used as an example.

DELIVERY EQUIPMENT

Debit:

With the cost of all delivery equipment acquired. The offsetting credit is to Accounts Payable or Notes Payable or Cash.

Credit:

With the cost of all delivery equipment disposed of. The offsetting debit is to Cash and to Allowance for Depreciation. If there is a loss or gain, this is debited or credited to Loss and Gain on sale of Fixed Assets.

ALLOWANCE FOR DEPRECIATION ON DELIVERY EQUIPMENT

Debit:

When any asset is disposed of, with the total allowance accumulated to date. The offsetting credit is to the asset account.

Credit:

With the allowance for depreciation made each year. Entry is usually made only once a year. The offsetting debit is to the Depreciation on Delivery Equipment account (an expense account).

It is not necessary that the method of handling the other asset accounts be discussed in detail, since they are handled in the same way as the Delivery Equipment account. In the Land account no entries are made for depreciation, but the Land account is debited with the cost of all land acquired and credited with the cost of all land sold, the loss or gain being shown in the same way that loss or gain on the sale of delivery equipment is shown.

The Accounts Payable account is credited with all open account liabilities and debited with all payments made on account.—Accounts Payable include all sums due on open account, that is, liabilities for which a written promise to pay has not been given. Accounts Payable usually arise from the purchase of merchandise, office supplies, or fixed assets. The Accounts Payable account shows the total amount due to creditors, separate records being kept to show the amounts due the individual creditors. It is credited and debited as is indicated in the accompanying account form.

ACCOUNTS PAYABLE

Debit:

With all payments made on account, the offsetting credit being to Cash and to Purchases Discounts. If a note is given a creditor when an account comes due, debit Accounts Payable and credit Notes Payable.

Credit:

With all purchases of merchandise made on open account, the debit being to Purchases; with all office or other supplies purchased, the debit being to the office supplies account; and with all fixed assets purchased on open account.

The Notes Payable account is credited with all notes given, and debited with all payments made.—Notes payable may be given to the bank when money is borrowed, to trade creditors when goods are purchased, or when an account comes due. In any of these cases, the Notes Payable account is credited in order that it may show the total of such notes. When any note is paid, the Notes Payable account is debited.

NOTES PAYABLE

Debit:

With all payments made on notes.
The credit is to Cash.

Credit:

With all notes given to bank for money borrowed, the debit being to Cash; with all notes given for merchandise purchased, the debit being to Purchases; with all notes given in payment of accounts, the debit being to Accounts Payable.

The Mortgage Notes Payable account is credited with mortgage notes issued and debited with all payments made on such notes.—When money is borrowed on mortgage, cash is increased or debited and mortgage payable is increased or credited. The reverse is the case when payments are made on a mortgage.

MORTGAGE NOTES PAYABLE

Debit:

With all payments made on notes secured by mortgages. The offsetting credit is to Cash.

Credit:

With all mortgage obligations issued. The debit is usually to Cash but might be to Notes Payable if the mortgage should be given in settlement of a note.

The drawing account of a partner is credited with all allowances for salary or profits, and debited with all drawings of cash or merchandise.—Proprietorship in a partnership is frequently shown in two accounts for each partner. These two accounts are called the *drawing account* and the *capital account*. During the accounting period, it is fre-

quently found advisable for the partners to allow themselves a salary which they may draw out in cash. The purpose may be to permit each partner to receive something upon which he may live during the year, or to make a more satisfactory division of profits than would otherwise be possible. The drawing account is used to record the sums drawn by the partner from time to time, to show any salary or other allowance to the partner, and to show the partner's share of the net income for the period. When the allowance is due, the salary account is debited, exactly as it would be were the salary being paid to a clerk or other employee, and the drawing account of the partner is credited. Sometimes a separate salary account is kept, called *Partners' Salaries*, which is debited with salary allowances to partners. When the partner draws out cash, his drawing account is debited. The balance of the account, therefore, shows the amount with which he has been credited but which he has not withdrawn. At the end of the accounting period, when the profits for the period and the share of each partner in the profits have been determined, the amount is credited to the drawing account. The drawing account thus shows, on the credit side, the salary allowance and the share of profits allowed the partner, and on the debit side, the amount which the partner has withdrawn. If the total credits exceed the total debits, the difference represents allowances and profits not withdrawn. This balance may be then transferred to the Capital account, increasing the credit balance. If the total debits exceed the total credits, the difference represents the amount withdrawn in excess of allowances and the partner's share of profits. It is a reduction of the capital investment and is transferred to the Capital account as a debit. These facts are summarized as follows:

DRAWING ACCOUNT OF PARTNER

Debit:

With all cash withdrawn, the offsetting credit being to Cash. At the end of the period, debit with any allowances not withdrawn, the offsetting credit being to the partner's capital account.

Credit:

With all salary allowances of the partner, the offsetting debit being to Partners' Salaries; with the share of the profits allowed the partner, the offsetting debit being to an account which summarizes the profit and loss of the period. At the end of the period, credit with any excess of withdrawals over allowances, the offsetting debit being to the partner's Capital account.

The Capital account of each partner is credited with the original investment and any increases in investment, and is debited with any decreases in investment.—By the use of the drawing accounts, the necessity for making a great many entries in the Capital accounts during the accounting period is avoided, and the Capital accounts are reserved for those entries which summarize the results of the period. More detailed information can always be obtained by reference to the drawing accounts.

CAPITAL ACCOUNT OF THE PARTNER

Debit:

With any excess of withdrawals over allowances and profits, the offsetting credit being to the drawing account; with any withdrawals of investment, the credit being to Cash. If the business is liquidated, debit with the cash or other assets paid to the partner, the credit being to Cash or other asset account.

Credit:

With the original investment, the debit being to Cash or to other asset account according to what is paid in; with any excess of profits or allowances over withdrawals, the debit being to the drawing account; with any additional cash or other investments after the business is started, the debit being to Cash or other asset account.

Detailed income accounts are credited with the income, and expense accounts are debited with the expenses of the business.—A full discussion of each of the income and expense accounts is unnecessary. It need only be said that

the income accounts are credited with all income, a separate account being kept for each kind of income, and that expense accounts are debited with the expenses according to the nature of the expense. It was stated in the preceding chapter that the number of accounts to be kept depends upon the nature and size of the business. This statement applies especially to the income and expense accounts. Expenses may be classified in detail, or many kinds of expenses may be grouped together in a single account. For example, telephone and telegraph expenses may be recorded in a single account, or a separate account may be kept for each. The same is true of stationery and postage. The decision whether or not to open a separate account in the ledger to record any item of expense is made on the basis of the amount of that particular item of expense that is incurred in an accounting period, the possibility of reducing the amount of the expense, and the necessity for the management to be informed as to the amount. It is customary to maintain an account called *Miscellaneous Office Expense* and another called *Miscellaneous Selling Expense* in which items too small to justify the opening of separate expense accounts are charged.

When income accounts are credited, the offsetting debit is usually to Cash or to Accounts Receivable, and when expense accounts are debited, the credit is usually to Cash or to Accounts Payable.

The sales returns and the sales allowances are debited to Sales Returns and Sales Allowances accounts respectively.—The student knows that when sales are made, Cash or Accounts Receivable is debited and Sales is credited. Now when goods which have been sold are returned, or when an allowance is granted a customer, the transaction really results in a reduction in the sales, and the fact might

well be shown by a debit to Sales and a credit to Cash or to Accounts Receivable. This of course would merely be a reversal of the original record of the sales transaction. But we wish to show in the statement of income and expense, the amount of the sales returns and of the sales allowances. To secure the information for this report, we, therefore, keep a separate record of the sales returns and the sales allowances, which means that we keep separate accounts for them. These transactions are, therefore, recorded by debiting Sales Returns or Sales Allowances and crediting Cash or Accounts Receivable. Thus, at the end of the accounting period, the Sales account shows the total sales of the period, while the Sales Returns and the Allowances accounts show the reductions in the sales. By offsetting the one against the other, the net sales for the period may be determined.

SALES

Debit:

With the sales returns, the total being determined at the end of the period, and the credit being to the Sales Returns account; with the sales allowances at the end of the period, the credit being to the Sales Allowances account.

Credit:

With the sales of the period, the debit being to the Cash or Accounts Receivable or Notes Receivable accounts.

SALES RETURNS

Debit:

With all sales returns during the period, the offsetting credit being to Cash or to Accounts Receivable.

Credit:

At the end of the period with a single total for the period, the offsetting debit being to the Sales account.

SALES ALLOWANCES

Debit:

With all sales allowances during the period, the offsetting credit being to Cash or to Accounts Receivable.

Credit:

At the end of the period with single total for the period, the offsetting debit being to the Sales account.

An account called Expense and Income is used to summarize all expense and income for an accounting period.—At the end of each accounting period the Expense and Income account is opened in the ledger, and all expense and income is transferred to this account. The expense is transferred to it by debiting Expense and Income and crediting each of the expense accounts. The income is transferred to it by crediting Expense and Income and by debiting each of the income accounts. In this way, the Expense and Income account shows the total expense, including the cost of goods sold, on the debit side, and the total income on the credit side. The difference between the debits and the credits is the net income for the period which is then transferred to net worth by debiting Expense and Income and crediting some proprietorship account. In a single proprietorship or in a partnership, the credit is to the Drawing account. In a corporation, the credit is to Surplus. Thus the Expense and Income account is opened and closed at the end of the period, and no entries are made in it at any time during the period. It should be noted also that the entries made to transfer the expense and income to the Expense and Income account result in balancing each of the expense and income accounts, that is, in making the two sides of each account equal. Thus, these accounts are cleared for the entries of the next period. The reason the expense and income accounts are closed in this way and the balance sheet accounts are not closed in this way is that these accounts show the total expense and income for the period, and each account must be cleared at the end of the accounting period to enable the account to show the total expense or income for the next period. The entries made in the Expense and Income account are shown in tabular form on page 138.

EXPENSE AND INCOME

Debit:

With all expenses for the period and for the cost of goods sold. The offsetting credit for expenses is to the various expense accounts; for cost of goods sold, the credit is to the Purchases account; the balance representing net income is transferred to proprietorship by a debit to Expense and Income and a credit to the capital account.

Credit:

With all income for the period. The offsetting debit is to the various income accounts.

QUESTIONS FOR DISCUSSION

1. Why does a proprietor keep a separate account for Furniture and Fixtures? Why not keep one account for furniture and another for fixtures?
2. Explain the transactions out of which Accounts Receivable arise. Explain the transactions out of which Notes Receivable arise.
3. Would a customer rather have his debt to the business represented by an Account Receivable or a Note Receivable? Why?
4. Is there enough difference between a Note Payable and a Mortgage Note Payable to warrant the former being shown on the balance sheet as a current liability and the latter as a fixed liability?
5. If a company were to give two mortgage notes, one a land mortgage and the other a chattel mortgage, should these be shown separately on a balance sheet?
6. Can you give examples of assets and liabilities other than those mentioned in this chapter? What would be the assets and liabilities of a mining company, the Coco Cola company, a street railway company?
7. Is there any special advantage in using a drawing account as well as a Capital account? What information should be placed in each? How do you account for the fact that a drawing account usually shows a debit balance? Would you show the drawing account on a balance sheet? If not, what would you do with it?
8. Among your accounts is one supplying this information:

L. S. Smith

50 | 50

Does this account give enough information? Is there any way by which you would determine whether this is a customer's account or a creditor's

account? Can you make a recommendation respecting the account which may be of future value?

9. If a business makes a sale of \$200 and receives, in return, cash for \$100 and a note for the remainder, what accounts are debited and credited?

10. How do the assets of a law firm differ from those of an automobile manufacturing company? Those of a draying company? Those of a bank?

11. What explanation can you give for placing proprietorship information in the same position as liability information?

12. Explain where you would place an allowance for depreciation in the balance sheet. When you set up an Allowance account, does that mean that you have taken something out of the business, or does it mean that such account merely lessens the total assets? Does it mean anything else?

13. What do you understand by purchase returns and allowances and sales returns and allowances? Why put returns and allowances in separate accounts? Why not put the purchase returns and allowances in the Purchases account, and the sales returns and allowances in the Sales account?

14. Are Freight In and Freight Out both expense accounts? If so, why is Freight In included in the cost of goods sold, while Freight Out is a selling expense?

15. Justify the classification of income into operating and nonoperating income, and of expense into operating and nonoperating expense. What advantage do you see in any classification? Where is operating income shown in a statement of income and expense?

16. Can you make a rule to be followed in distinguishing between operating income and expense, and nonoperating income and expense?

17. Name the expenses which should be classified under administrative expense.

18. John Wilson agrees to pay 6 per cent interest on \$200 which he borrows for one year from the bank. On Wilson's books how should you record the information at the time the loan is secured? At the time Wilson pays the loan?

PROBLEMS

1. The following are the expenses of J. C. Cunningham for one month:

- Jan. 1 Gasoline for delivery truck, \$6; salary for stenographer, \$20; office boy, \$10, and telegrams, \$2.
5 Repairs on office furniture and fixtures, \$2; advertising circulars, \$20; and light for store, \$4.
8 Rent, \$30; boy for sales department, \$9, and gasoline for delivery truck, \$6.
10 Telephone bill, \$2, and expense for getting horse shod, \$1.
12 Window display, \$5; repairs for adding machine, \$2, and salary for delivery man, \$25.
15 Insurance and taxes, \$50; stationery, \$6, and salaries of office help, \$75.
17 Salary of janitor, \$15; twine and wrapping paper, \$7, and repairs on store fixtures, \$3.
20 Advertisement in local paper, \$1; rent of office, \$14, and salary of proprietor, \$200.
25 Stationery and postage, \$10; repairs on typewriter, \$3, and repairs on delivery truck, \$12.
27 For buyer of merchandise, \$17; distributing advertising circulars, \$6, and salaries of sales clerks, \$20.
31 Gasoline for delivery truck, \$6, and rent, \$30.

Open accounts for selling, delivery, and administrative expense, and place the items, with dates, in the proper accounts. Preserve for future use.

2. You find that the bookkeeper for J. M. Jones has listed the following expenses of the company in one general account:

- June 1 Repairs to delivery wagon, \$4; newspaper advertising, \$5; janitor, \$7.
4 Sales salaries, \$12; rent, \$40; interest on note, \$3.
7 Repairs on furniture and fixtures, \$3; light bill, \$1; gasoline bill, \$2.
9 Stationery and postage, \$4; interest on notes, \$2; repairs to typewriter, \$1.
12 Newspaper advertising, \$4; errand boy, \$2.
14 Circulars printed, \$3; circulars distributed, \$1.
15 Stenographer, \$6; traveling expense for buyer, \$7; gasoline, \$3.

Open the required expense accounts and record the items in the correct accounts.

3. The following are some of the transactions of R. O. Snell for the month of December:

- Dec. 1 Invests \$5,000 in cash; land, \$1,000, and building, \$2,000.
- 2 Buys furniture and fixtures, \$250, and pays for its delivery, \$2.
- 5 Buys a typewriter for \$50; pays for remodeling building, \$100.
- 6 Purchases merchandise from J. A. Smith Co. for \$420, terms 1/10, n 60.
- 7 Sells to King Co. merchandise, \$200, terms 1/10—n/30, and returns to J. A. Smith Co. damaged merchandise of \$10.
- 9 Purchases from A. L. Abel, merchandise, \$300, 2/10—n/30. Returned goods from King Co. amounting to \$10.
- 10 Pays American Freight Co. \$17 for freight on merchandise purchased; paid clerk for week's service, \$18; paid for advertising in local paper, \$10, and withdrew for personal use, \$25.
- 12 Purchased for cash from B. M. Anderson merchandise of \$125.
- 15 Paid the following expenses: light, \$5; water, \$1; telephone, \$75.

Set up the various accounts required and record the above information. Preserve for future use.

REFERENCES FOR FURTHER STUDY

- CONSTRUCTION AND INTERPRETATION OF ACCOUNTS: Woodbridge, *Elements of Accounting*, pp. 135-157
- DEBIT AND CREDIT: Kester, *Accounting Theory and Practice*, 3d. ed., Vol. I, pp. 83-93
- THE CONSTRUCTION AND INTERPRETATION OF ACCOUNTS: Hodge and McKinsey, *Principles of Accounting*, pp. 81-87
- ORDINARY ACCOUNTS CLASSIFIED: Scovill, *Elementary Accounting*, Part One, pp. 105-115
- THE ACCOUNTS GROUPED; REAL AND NOMINAL: McCarty and Amidon, *Survey Course in Accounting*, pp. 82-86

CHAPTER X

THE CONTROLLING ACCOUNT AND THE SUBSIDIARY ACCOUNTS

PURPOSES OF THIS CHAPTER

1. To explain the controlling account and its relation to the subsidiary accounts
 2. To show the advantages of the controlling account
 3. To explain the method of recording transactions which affect it
-

We have already learned that in the balance sheet the total of the accounts receivable appears as a single item, but that it is necessary to keep elsewhere a record of the amount due from each customer. Likewise, the accounts payable are shown in the balance sheet in total, but it is necessary to keep a record of the amount or amounts due each creditor in order that payments may be made when due, and in order that no account may be paid twice. In the present chapter, we shall explain how the detailed records are kept and how it is possible to obtain, with a minimum of trouble, the total of these amounts to be shown in the balance sheet. The method used is the keeping of a *controlling account* and a set of subsidiary accounts.

The controlling account may be defined as an account showing, in summary, facts which are shown elsewhere in detail.—In the case of the accounts receivable, for instance, the detailed information consists of a record of the charge made against each customer and the payments made by

him, the difference being the amount which the particular customer owes. The total of the sums due from all the customers equals the balance of the controlling account for accounts receivable. Another example of a controlling account is Accounts Payable. This account shows the total amount due creditors on open account, while detailed records show the amount due each individual creditor. The operation of the controlling account and the detailed records will now be explained and illustrated.

The detailed records are called subsidiary accounts. The ledger containing the subsidiary accounts is called a subsidiary ledger.—In the case of the accounts receivable, the subsidiary ledger is called the *accounts receivable ledger*. Likewise, the accounts payable subsidiary records are kept in a separate ledger called the *accounts payable ledger*. Each of these subsidiary ledgers is controlled by an account in the general ledger.

To illustrate the use of a controlling account, let us assume that on January 1, 1930, the business of James Martin had accounts receivable amounting to the total of \$405. The balances owed by individual customers were as follows:

Hugh Vollaton	\$75
George Patterson	90
J. L. Patton	100
Jack Malone	60
Ellis Jones	80
Total	<u>\$405</u>

The total of these accounts would be shown in an account in the general ledger under the title Accounts Receivable. In addition, there would be an accounts receivable ledger, which might be a separate book or merely some ledger pages in a separate place in the general ledger. In the accounts receivable ledger, each customer has an account. The charges against the customer have been recorded on

the left or debit side of the customer's account, and payments made by him or allowances given to him have been recorded on the right or credit side. Regardless of any previous transactions, the accounts of James Martin with his customers are shown on page 145-6. It will be observed that these transactions have all been recorded in the subsidiary accounts as of the date of the sale, not as of January 1. Of course, in the controlling account, the balance due on January 1 is shown.

Now let us assume that the following additional transactions occur during January:

- Jan. 2 Malone remits \$60
- 3 Patterson makes an additional purchase, \$100
- 8 Vollaton remits \$75
- 10 Patterson remits \$90
- 15 Patton remits \$100
- 18 Malone makes an additional purchase \$50
- 20 Jones makes an additional purchase \$40
- 30 Jones remits \$40
- 30 Vollaton purchases merchandise \$90
- 31 Jones is allowed \$10 on account of defective merchandise

Each sale must be entered in the general ledger as a debit to Accounts Receivable and a credit to Sales. In addition, each sale must be recorded as a debit to the account of the individual customer. Thus, as the debit is made in the controlling account, a debit for the same amount is made in some account in the subsidiary ledger, the controlling account being at all times kept in balance with the subsidiary accounts. In the same way, each receipt of cash is recorded in the general ledger accounts as a debit to Cash and a credit to Accounts Receivable, and each time such a credit is made in the controlling account, a credit for the same amount must be made in the subsidiary ledger in the account of the customer who made the cash remittance.

When Jones was allowed \$10 on account of defective merchandise, the Sales Allowances account was debited and the Accounts Receivable account was credited. To keep the subsidiary ledger in balance with the controlling account and also to make the subsidiary ledger show correctly the balance due from Jones, the account of Jones in the accounts receivable ledger was credited with the amount of the allowance. The accounts in which these transactions were recorded appear as illustrated.

In the general ledger:

ACCOUNTS RECEIVABLE

1930			1930				
Jan.	1	Balance	405.00	Jan.	2	Cash from Malone	60.00
	3	Sale to Patterson	100.00		8	Cash from Vollaton	75.00
	18	Sale to Malone	50.00		10	Cash from Patterson	90.00
	20	Sale to Jones	40.00		15	Cash from Patton	100.00
	30	Sale to Vollaton	90.00		30	Cash from Jones	40.00
					30	Allowance to Jones	10.00
					31	Balance	310.00
			<u>685.00</u>				<u>685.00</u>
Feb. 1		Balance	310.00				

The following are the accounts in the accounts receivable ledger:

HUGH VOLLATON

1929			1930		
Dec. 29	Merchandise	75.00	Jan. 8	Cash on account	75.00
1930					
Jan. 30	Merchandise	90.00			

GEORGE PATTERSON

1929			1930		
Dec. 21	Merchandise	60.00	Jan. 10	Cash on account	90.00
31	Merchandise	30.00			
1930					
Jan. 3	Merchandise	100.00			

ELEMENTS OF ACCOUNTING

J. L. PATTON

1929		1930	
Dec. 26 Merchandise	<u>100.00</u>	Jan. 15 Cash on account	<u>100.00</u>

JACK MALONE

1929		1930	
Dec. 22 Merchandise	<u>60.00</u>	Jan. 2 Cash on account	<u>60.00</u>
1930			
Jan. 18 Merchandise	<u>50.00</u>		

ELLIS JONES

1929		1930	
Dec. 10 Merchandise (a)	<u>80.00</u>	Jan. 30 Cash on account (b)	<u>40.00</u>
1930		30 Allowance for defective merchandise (a)	<u>10.00</u>
Jan. 20 Merchandise (b)	<u>40.00</u>		

When James Martin prepares his monthly financial statements as of January 31, the accounts receivable will be shown on the balance sheet as \$310.00 less, of course, the allowance for bad debts. To assure himself that he really has this amount of accounts receivable and that there has been no mistake in the keeping of his books, Martin will have his bookkeeper draw off a list of the balances owed by the individual customers. These balances are as follows:

JAMES MARTIN

Schedule of Accounts Receivable, January 31, 1930.

Hugh Vollaton	90.00
George Patterson	100.00
Jack Malone	50.00
Ellis Jones	70.00
Total	<u><u>310.00</u></u>

Since the total of the individual accounts agrees with the balance of the controlling account for accounts receivable, the proprietor can be fairly certain that there has

been no mistake. Of course, an overstatement of the amount owed by one customer might be offset by an understatement of the amount due from some other customer, but this is not likely, unless an item has been carried to the wrong customer's account. If the controlling account and the subsidiary ledger agree, the probability is that the amount is correct.

The accounts receivable ledger is usually ruled with single lines to indicate which bills have been settled.—The method of entering the items in the accounts receivable ledger and of ruling the accounts should be carefully noted. Instead of throwing all debit items together and all credit items together, as is done in other accounts, it is usually better to keep a record of individual bills and credits. To do this the accounts in the accounts receivable ledger must be ruled at the time the customer remits. A single line is used instead of the usual double line, this single line indicating that all items above it are settled. This ruling system, which is illustrated in the accounts of James Martin, enables the bookkeeper to determine at a glance which bills have been paid and which have not, whereas, if the account of the customer were balanced by the method used in other accounts, it would be less easy to determine which particular bills had been paid. George Patterson, for example, made two purchases in December, paying both of these at one time in January. When he made the remittance of \$90, the bookkeeper drew a single line under the paid items on the debit side and under the amount of the credit on the other side. His next purchase was entered on the next line on the debit side. In Hugh Vollaton's account, the single lines show that an invoice of \$90 has not been paid. The account of Ellis Jones was not so easily handled. Jones made a purchase on December 10, but the merchandise was slightly

defective. He put in a claim for an allowance, and then waited in making his payment until he could learn how much allowance would be made. In the meantime he made an additional purchase which he also paid for. The bookkeeper could not rule off Jones' account when he made this remittance because the first bill remained unpaid. The system of lettering the purchase and the remittance, as illustrated, was used to indicate which check received was meant to be applied against each purchase. The letter (a) entered opposite the first purchase and also opposite the amount of the allowance indicates that the allowance was to be applied against the first purchase. When Jones sends in a check for the \$70 which he owes, the account can be ruled with a single line. The single line simply means that the bookkeeper can disregard the items entered above the line in determining the balance due.

The Accounts Payable controlling account and the accounts receivable ledger are kept in the same manner as that by which the accounts receivable records are kept. The accounts payable ledger, like the accounts receivable ledger, may be a separate book or it may consist of some pages in a separate place in the general ledger.

Many of the balance sheet accounts are controlling accounts.—The Notes Receivable account and the Notes Payable account are controlling accounts, but it is not necessary to keep a separate account for each note. Instead, a notes receivable register and a notes payable register are kept, in which the important information pertaining to each note is recorded. The object of the notes receivable register is to enable the management to know when each note comes due, in order that it may be presented for payment on the proper day, also to enable the management to know where each note is at all times. The object of the notes payable

register is to enable the management to know what notes are outstanding in order that the funds may be ready to meet any note presented for payment, or that the management may make arrangements to renew the note at maturity.

The Machinery account is also a controlling account. The subsidiary record in this case is a plant register. This is similar to a ledger, but there are no formal debits or credits. When a machine is purchased, a card is made out for it and placed in the register with the records for the other machines. This card indicates the name and number of the machine, its location in the plant, the name of the manufacturer and dealer from whom it was purchased, the expected life, the monthly and annual depreciation rates, and similar information. When the machine is finally disposed of, the date and the price received are recorded on the card and the card is removed from the register and filed. Similar records may be kept for any fixed asset, such as furniture and fixtures, buildings, delivery equipment, and even land, if a sufficiently large number of pieces of land are owned to justify it.

The Cash account is sometimes a controlling account. If the company has cash on hand and, in addition, has cash on deposit with a number of banks, the total amount of cash may be shown in the Cash account, detailed records being kept of the cash on hand and of the cash on deposit with each bank. The Capital Stock account kept by corporations is another example of a controlling account, the subsidiary record in this case being the capital stock ledger. The capital stock ledger contains an account with each stockholder, showing the number of shares issued to him, the number disposed of by transfer at any time, and the number of shares still held.

Controlling accounts have many advantages in accounting.—One advantage of the use of controlling accounts is that the accounting work of a large business can more easily be distributed among a number of bookkeepers. One bookkeeper may be assigned the work of the general ledger, another the accounts receivable ledger, another the accounts payable ledger, whereas, if all the accounts were in a single ledger, this division could not so easily be made. Another advantage is that the work of preparation of the financial statements is greatly simplified. Instead of several hundred accounts receivable to be shown in the balance sheet, or several hundred accounts to be totaled to obtain the figure for the accounts receivable to be shown in the balance sheet, there is only the one account, Accounts Receivable, to be balanced. The same is true of the other controlling accounts. But the greatest advantage of the use of controlling accounts is that errors are much more easily located. Some errors are certain to be made where there is much accounting work to be done, and if there is no clue as to the part of the ledger in which the mistake has been made, it is a difficult matter to find the error. If, however, controlling accounts have been used, the bookkeeper can soon determine in what part of the ledger the error was made. If the sum of the balances of the individual accounts of the accounts receivable ledger equals the balance of the controlling account for Accounts Receivable in the general ledger, the bookkeeper can be fairly sure that the mistake was not made in the accounts receivable section. The same is true of the accounts payable, where the controlling account can be balanced against the subsidiary ledger, and of the notes receivable and the notes payable, the controlling account in these cases being balanced against the items shown in the notes receivable register and the

notes payable register, respectively. The Cash account may be checked against the cash actually on hand and in the bank. Since the other accounts in the ledger do not contain many entries, an error in those accounts would be comparatively easy to find. The more checks are applied in the keeping of the accounts, the easier is the work of locating errors. Controlling accounts afford one of the best means of making such checks.

QUESTIONS FOR DISCUSSION

1. Which balance sheet accounts are controlling accounts?
2. Of what advantage are controlling accounts?
3. Should a manufacturer who sells all of his output to four or five companies use a controlling account for accounts receivable? Why?
4. Would it be possible to remove the Accounts Receivable account from the general ledger and to determine the amount of accounts receivable by totaling the balances of the customers' ledger when a balance sheet is made? Would this be desirable?
5. What are the various kinds of transactions which affect the accounts receivable controlling account and its subsidiary accounts?
6. What is the advantage of ruling the accounts receivable and the accounts payable subsidiary accounts with single lines? Could this same method be used in the cash account? Why?
7. Could the principle of the controlling account be applied to expense accounts? Would there be any advantage in showing all selling expenses in one account in the general ledger with a subsidiary set of accounts showing the amount of each kind of selling expense?
8. Suppose that you were called in to audit the books of a company and found a discrepancy of several years' standing between the balance of the accounts receivable account and the sum of balances in the accounts receivable ledger. The bookkeeper reports that he is unable to find the error. Which record is more likely to be correct? If you were unable to find the error, what amount would you show on the balance sheet which you prepared?
9. How does the subsidiary record for notes receivable differ from the subsidiary record for accounts receivable?

PROBLEMS

1. Make proper entries for the following in general ledger accounts, customers' accounts, and creditors' accounts. Use regular ledger paper for both general ledgers and subsidiary ledgers. At the end of the month, prove the correctness of the general ledger accounts by comparing the balances of the controlling accounts with the total balances of the subsidiary accounts.

- March
- 1 Frank Short begins business by investing \$3,000 cash
 - 2 Buys goods on account from J. P. Roberts, \$430
 - 3 Buys goods on account from Western Grocery Company, \$800
 - 4 Sells goods on account to P. J. Holt, \$210
 - 4 Sells goods on account to E. M. Ferguson, \$160
 - 5 Sells goods on account to J. G. Bone, \$195
 - 7 Pays cash to J. P. Roberts, \$430
 - 8 Buys delivery truck for \$1,000. Pays \$200 cash and gives note for balance
 - 10 Buys goods on account from J. P. Roberts, \$500
 - 11 Receives cash on account from E. M. Ferguson, \$160
 - 12 Makes allowance to J. G. Bone for defective merchandise, \$10
 - 14 Sells goods on account to F. S. Chilton, \$110
 - 15 Buys on account from Northern Grocery Company, \$960
 - 16 Pays \$500 to Western Grocery Company to apply on account
 - 17 Returns to Western Grocery Company \$100 worth of goods which were not the goods that were ordered
 - 18 Sells goods on account to H. A. Jack, \$86
 - 19 Cash sales, \$75
 - 20 Receives note for \$210 from P. J. Holt to apply on account
 - 21 Buys goods on account from Marshall Field, \$630
 - 23 Sells goods on account to E. M. Ferguson, \$125
 - 24 Sells goods on account to P. J. Holt, \$75
 - 26 Sells goods on account to J. S. Zucker, \$90
 - 27 Sells goods on account to F. M. Murdock, \$60
 - 31 Pays rent for month, \$25

March 31 Pays sales salaries, \$125

31 Pays garage bill, \$8

31 Pays office salaries, \$80

The merchandise on hand at the end of the month was \$2,750. Prepare a balance sheet and a statement of income and expense.

REFERENCES FOR FURTHER STUDY

CONTROLLING ACCOUNTS: Scovill and Bailey, *Elementary Accounting*, Part Two, pp. 42-60

DIVISION OF THE LEDGER: Folts and Stillman, *Interpretive Accounting*, pp. 377-383

CONTROL ACCOUNTS: Woodbridge, *Elements of Accounting*, pp. 188-204

CHAPTER XI

THE JOURNALS

PURPOSES OF THIS CHAPTER

1. To show the necessity of certain records which are called the journals
 2. To explain the information which is usually recorded in the journals
 3. To show in what respects all journals are alike
-

In the discussion of the accounting records which was given in Chapter VII, the steps taken in recording a business transaction were pointed out. It was shown that the facts are first recorded on some business paper such as a sales ticket or a purchase invoice; that they are next recorded in some journal or book of original entry; that they are then transferred from the journal to the ledger; and finally, that the ledger accounts are used in preparing the accounting reports. Our discussion of the records and reports has thus far proceeded in the order which is the reverse of this: the reports were considered first, the accounts were considered next. We are now in a position to consider the source of the information which is recorded in the accounts, and this leads us to a study of the journals.

All information must be recorded in some other accounting record before being entered in the account.—Up to this time we have been making entries directly in the accounts. It was pointed out in Chapter VII, however, that a transaction is first recorded in some journal, and that our illustrative entries would be made in the ledger accounts only

for the sake of making clear the use of the accounts. Entries should not be made in the accounts until the information has been entered in a journal. This rule applies to the recording of the regular transactions and also to the transferring of balances from one account to another, such as the transferring of the balance of the drawing account to the capital account or the transferring of the balances of the Sales Returns and the Sales Allowances accounts to the Sales account. It does not apply to the computation of the balance of an account and the bringing of this balance down to the lower part of the account, as has been explained for all of the balance sheet accounts.

There are several reasons why information must be entered in some other accounting record before being entered in the ledger. First, mistakes are very likely to be made if this is not done. If, for example, the bookkeeper enters an item of \$45.25 on the debit side of the Cash account and then turns to the Accounts Receivable account to record the credit, he may enter the amount as \$54.25 or some other incorrect amount, or he may record the item on the wrong side of the account. He may forget to record either the debit or the credit. Unless he writes out for each transaction a statement that one account is to be debited and another is to be credited and the amount, errors are likely to occur frequently. Second, it would be difficult to find an error once it had been made. Without any record showing, for all transactions, the accounts debited and credited, it would not be an easy matter to verify the correctness of the entries which had been made in the ledger. Third, it would not be easy to record, in the account, the necessary information relative to what has happened. There is not much room on a line in the ledger, and frequently an extended explanation of what it is that is being recorded is

desirable. Such information can best be recorded in some book of original entry.

The accounting records in which transactions are first entered are called journals.—Most businesses find it desirable to use more than one kind of journal, but a single transaction would, in most cases, be entered in only one journal. The simplest form of journal is the daybook, or as it is commonly spoken of in accounting, the general journal. In some very small businesses, all transactions are entered in the general journal, and no other journal is used. It is only the very smallest business which can economically use only one journal, however, for even a very small business can profitably use a separate journal to record the cash transactions.

The reason for the use of more than one kind of journal is to save labor. The student has learned that the purpose of recording the results of business transactions in the accounts is to classify the information and particularly the debits and credits of the transactions. This work of classification can be simplified if the transactions are classified as they are recorded and if all transactions of the same nature are entered in some one journal. To illustrate, all cash sales result in a debit to Cash and a credit to Sales. Therefore, if the total of the cash sales for a month is obtained by first entering the cash sales of each day in one column of a special journal, and then, at the end of the month, obtaining the total of that column, the facts relative to cash sales can be recorded in the accounts by one debit to Cash and one credit to Sales for the total cash sales of the month. The same principle applies in recording other types of transactions which occur many times during each month.

There are many kinds of journals, though not all of these kinds will be found in every business. First, there is the

purchases and sales group of journals. This group includes four journals: (1) the purchases journal, which is used to record those transactions resulting in a debit to Purchases and a credit to Accounts Payable; (2) the purchases returns and allowances journal, which is used to record those transactions resulting in a debit to Accounts Payable and a credit to Purchases Returns or Purchases Allowances; (3) the sales journal, which is used to record those transactions which result in a debit to Accounts Receivable and a credit to Sales; and (4) the sales returns and allowances journal, which is used to record transactions resulting in a debit to Sales and a credit to Sales Returns or Sales Allowances. A journal called the voucher register is used in some businesses to take the place of the purchases journal. Second, there are the cash journals. This group includes two journals: (1) the cash receipts journal, which is used to record all transactions resulting in a debit to Cash; and (2) the cash disbursements journal, which is used to record all transactions resulting in a credit to Cash. Third, there are the notes journals. This group includes two: (1) the notes receivable journal, which is used to record all debits to Notes Receivable; and (2) the notes payable journal, which is used to record all credits to Notes Payable. The credit in the notes receivable journal is usually to Accounts Receivable or to Sales, while the debit in the notes payable journal is usually to Cash, to Purchases, or to Accounts Payable. Fourth, there is the general journal which constitutes the final group. The general journal is used to record miscellaneous transactions which cannot be classified for entry in any one of the special journals. These journals will be discussed and illustrated in the chapters which follow, but it is desirable first to indicate in what respects all of the journals are alike.

All journals are designed to show the debits and credits of the transactions which are there recorded, and other essential information.—One purpose of the journal is to show each transaction as analyzed into its debits and credits. Unless the transaction has been thus analyzed, the book-keeper is likely to make mistakes in posting the items to the accounts, for he must think of the debits and the credits and he must also keep in mind the amount of the transaction while he finds the page in the ledger on which the item is to be recorded. Not only must he find the proper page, but he must also be sure to enter the item on the correct side of the account. If the transaction has been previously analyzed into its debits and credits, however, the book-keeper can concentrate his attention on the work of transferring the items to the accounts, and error is less likely to be made. Therefore, although books of original entry differ in many other respects, all are alike in showing the debits and credits of the transactions which are recorded there. Other facts about the transaction are also shown in each book of original entry. Since explanations are usually omitted from the account, the complete record of the transaction must be shown in the journal. Each journal therefore provides a separate column for the explanation, though in some journals, such as the general journal, the explanation is written on a separate line below that showing the debits and credits. Every form of journal must also provide a place for recording the date of the transaction.

The journals show the pages of the ledger to which the debit and the credit are posted.—The process of transferring the debits and credits from the journal to the ledger is called *posting*. When a debit or a credit is posted to an account in the ledger, the number of that account must be recorded opposite the entry made for the transaction in

the journal. The reason for making this notation is that the bookkeeper must check his work regularly to see that he has posted the items to the proper accounts in the ledger and that he has entered each of them on the correct side of the account. Many concerns also employ public accountants or auditors to verify the correctness of the accounts, and the auditor checks the accuracy of at least a part of the posting. This checking is made easier if the number of the account to which the item has been posted is shown in the journal. Another reason for noting the number of the account is that this aids the bookkeeper in determining which items have been posted and which have not been posted. The fact that an account number is entered opposite the entry in the journal means that that item has been posted, and if no account numbers appear there, the item has not been posted. Unless the bookkeeper has some record to guide him in his posting, he would never know where he left off when he quit work, and should he be interrupted in his posting, he might overlook some items when he returned to the journal. An error of this sort would, of course, cause his accounts to show incorrect balances and make it impossible for him to prepare the statements correctly. Every journal, therefore, provides a column in which the number of the ledger account to which each item is posted may be entered. This column is known as the ledger folio column.

The number of the journal page on which the transaction was recorded is shown in the ledger.—When a debit or credit is posted to the ledger account, the number of the page in the journal on which the transaction was originally recorded is entered. This information is necessary in order that the correctness of the entry may be verified at any later time when the accounts are audited. It is also neces-

sary at times to secure a complete description of a transaction, and since explanations are usually omitted from the ledger accounts, it is necessary to refer to the journal where the explanation can be found.

Each entry made in the journal must be authorized by voucher.—A voucher is simply a business document recording the facts relative to the transaction. The record which is made out when the transaction is completed may be used to support the journal entry, or an additional voucher may be prepared. For example, when a purchase is made, a purchase invoice is usually received. When the entry is made in the journal to record the purchase, it may be made directly from the invoice, or an additional voucher may be prepared. The voucher, in this case, shows the account to be debited and the account to be credited; it gives the name and address of the seller; it indicates the terms of the purchase; and it would probably list the items purchased. It is signed by the proper officials, and constitutes the authority of the bookkeeper for making the entry in the journal. The purchase invoice is folded in with the voucher proper.

THE ACME COMPANY ACCOUNTING DEPARTMENT Chicago, Ill., May 1, 1930 No. 20	
Journal folio 16	
Debit:	
T. E. Sells — Accounts Receivable	25.00
Credit:	
Freight Out	25.00
Prepaid freight charged to Freight Out instead of to T. E. Sells, Accounts Receivable, the terms of sale being f.o.b. our freight station.	
Entered	Approved
R. P. Sims, bookkeeper.	O. O. Reed, auditor.

If no business paper is prepared as a part of the transaction, a voucher must be prepared and signed by the proper officials before the bookkeeper makes the entry. For example, the entry for depreciation requires a special voucher. A voucher, prepared to correct an erroneous entry which had been made in the cash disbursements journal, is illustrated on the preceding page.

QUESTIONS FOR DISCUSSION

1. The Cash Grocery Store makes all of its sales for cash and pays cash for all merchandise purchased. It gives very few notes to banks as it obtains few loans from banks. What journals would it need?
2. The Palais Royal, a department store, has several thousand charge accounts with its customers. Do you think it should have a sales journal? If so, what would be the nature of the entries recorded in it?
3. The bookkeeper of the Sanitary Company has been accustomed to making entries in the journals upon oral instructions from the treasurer and other officers. What objection do you see to this procedure?
4. You are asked to install a set of books for a small bookstore. How would you determine what journals to use?
5. After you had decided what journals to use for the bookstore, how would you determine the form of each journal?
6. The bookkeeper of the Clarendon Grocery states that he is often interrupted in his work of posting and that he does not always know what items had been posted before he stopped. What plan would you suggest?
7. The bookkeeper of a local concern argues that since the transactions which he enters are of a routine nature, most of them being purchases and sales, that he does not need to enter the transactions in a journal before recording them in the accounts. What reply do you make?

CHAPTER XII

THE PURCHASES AND SALES GROUP OF JOURNALS

PURPOSES OF THIS CHAPTER

1. To show the saving in bookkeeping work accomplished through the use of each journal of these groups
 2. To show what kinds of transactions are recorded in each journal
 3. To explain the method of using each journal
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As was pointed out in the preceding chapter, there are four journals in the group called the purchases and the sales group of journals. These are (1) the purchases journal, (2) the sales journal, (3) the purchases returns and allowances journal, and (4) the sales returns and allowances journal. The voucher register, though frequently used instead of the purchases journal, is also properly considered to belong to this group.

The purchases journal is used to record purchases of merchandise.—The purpose of the purchases journal is to arrange the transactions which are to be debited to the Purchases account in a manner which will make the work of posting as simple a task as possible. It should be emphasized at the outset that the purchases journal is used to record only those transactions which result in a debit to the Purchases account. This journal is not to be used to record purchases of office supplies, office equipment, or any type of fixed asset.

The purchases journal may contain only one money column.—Since all purchases of merchandise are debits to Purchases and credits to Accounts Payable, all that is usually necessary in the purchases journal is one money column in which the amount of each purchase is entered. At the end of the month, this column may be totaled and this figure posted to the debit of Purchases and the credit of Accounts Payable. These two postings are all that are necessary so far as the general ledger accounts are concerned, but it is still necessary to post each individual item to the credit of the individual or company from whom the merchandise was purchased. In its simplest form the purchases journal appears as illustrated.

PURCHASES JOURNAL

1930	LF			
May 1	1	A. B. Nelson and Company	700.00	
3	5	Welsh Mfg. Company	300.00	
5	4	Watson and Watson	400.00	
7	3	Piper and Company	600.00	
9	2	C. E. Hayes, Inc.	500.00	
			2,500.00	
	18	Purchases, Dr.	2,500.00	
	10	Accounts Payable, Cr.		2,500.00

The figures in the second column headed LF, meaning Ledger Folio, are the numbers of the accounts of the creditors in the accounts payable or creditors' ledger. It is not necessary to indicate in the journal itself that these numbers refer to the accounts payable ledger, since every purchase is known to be a credit to the account of the creditor. The notation placed below the regular entries in the journal is made at the close of the month when the total purchases for the month have been determined. The figure 18 opposite the word Purchases, Dr., means that this total has

been posted to the debit of the Purchases account which, in this case, is account number 18 in the general ledger. Accounts Payable account is account number 10, and the fact that the Accounts Payable account is credited is indicated by the slight indentation. When these items are posted, the general ledger accounts appear as follows:

PURCHASES

1930	LF	
May 31	PJ1	2,500.00

ACCOUNTS PAYABLE

	1930	LF	
	May 31	PJ1	2,500.00

It should be noted that in the ledger account, the journal from which the posting was made and the number of the page in that journal are indicated. The accounts in the creditors' ledger will next be illustrated.

PAGE

1

A. B. NELSON AND COMPANY

	1930	LF	
	May 1	PJ1	700.00

2

C. E. HAYES, INC.

	1930	LF	
	May 9	PJ1	500.00

3

PIPER AND COMPANY

	1930	LF	
	May 7	PJ1	600.00

4

WATSON AND WATSON

	1930	LF	
	May 5	PJ1	400.00

5

WELSH MANUFACTURING COMPANY

	1930	LF	
	May 3	PJ1	300.00

The details of the transaction are usually recorded in the **purchases journal**.—If the transactions were recorded directly in the accounts it would be impossible to place therein all of the data of which a record must be made. This difficulty is met by entering the most important information in the purchases journal itself, and by making reference to sources from which additional information can be secured. To illustrate, it may be desirable to record the following facts:

- May 1 Bought of A. B. Nelson and Co., merchandise terms net 60 days, Inv. No. 1, July 1, \$700.
 3 Bought of Welsh Manufacturing Co., merchandise, terms 3/10/30, Inv. No. 2, July 3, \$300.
 5 Bought of Watson and Watson, merchandise, terms 1/20/60, Inv. No. 3, July 5, \$400.
 7 Bought of Piper and Company, merchandise, terms 60 days, Inv. No. 4, July 7, \$600.
 9 Bought of C. E. Mayes, Inc., merchandise, terms net 60 days, Inv. No. 5, July 9, \$500.

PURCHASES JOURNAL

Date Recorded	LF	Account Credited	Address	Date of Inv. and terms	Voucher	Am't.
1930						
May	1	1	A. B. Nelson & Co.	111 State St., City	May 1, net 60	1 700
	3	5	Welsh Mfg. Co.	215 Lake Av. "	3, 3/10/30	2 300
	5	4	Watson and Watson	412 Well St. "	5, 1/20/60	3 400
	7	3	Piper and Co.	318 Main St. "	7, 60 days	4 600
	9	2	C. E. Hayes, Inc.	572 Clark St. "	9, net 60	5 500
						<u>2,500</u>
	18			Purchases Dr. 2,500.00		
	10			Accounts Payable Cr. 2,500.00		

The purchases journal may have more than one money column.—If there is more than one department of a business and the owners wish to know the amount of purchases for each department, the desired information is obtained by a purchases journal of more than one column. Since all goods purchased are a debit to a Purchases account for

one or the other of the departments, separate columns are provided for recording the purchases of each department; and since all purchases, regardless of department, are credits to Accounts Payable, an additional column is needed to record the credits. If the two departments are hardware and furniture, the purchases journal is drawn up as follows:

PURCHASES JOURNAL

1930	LF		Hardware Purchases, Dr.	Furniture Purchases, Dr.	Accounts Payable, Cr.
May 1	1	C. A. Nelson	700.00		700.00
3	5	W. E. Welch	300.00		300.00
5	4	R. L. Watson	200.00	200.00	400.00
7	3	M. A. Piper	600.00		600.00
9	2	C. E. O'Connell	300.00	200.00	500.00
			<u>2,100.00</u>	<u>400.00</u>	<u>2,500.00</u>
31	17	Hardware Purchases, Dr.		2,100.00	
	18	Furniture Purchases, Dr.		400.00	
	10	Accounts Payable, Cr.			2,500.00

At the end of the month, the entry indicated at the bottom of the page of the purchases journal is posted to the general ledger. This entry may be written underneath the last entry on the page of the purchases journal, or the posting may be made from the totals of the columns. In that case, the page of the ledger to which each total is posted should be written in parentheses just before or below the figures at the foot of each column.

In the chapter on "The Controlling Account and the Subsidiary Accounts" it was explained that the greater the number of checks on the accuracy of the work, the easier is the work of book-keeping. The use of the divided column journal, as just illustrated for recording purchases, gives a very important check on the accuracy of the totals placed

at the foot of the columns. On each page of the purchases journal, or any other divided column journal, the totals of the debits should equal the totals of the credits. The reason this is true is that for every debit made on any line, there is an equal credit. Therefore, when the columns are totaled, the various debit columns should be added to determine the total debits of all columns, and the same is done for the credits where there is more than one column of credits. If the total of all the debit columns equals the total of all the credit columns, the work is probably correct. The bookkeeper should make it a rule always to make this check before posting to the ledger any of the totals in a journal.

Voucher No.	
Check No.	
GREENVILLE MERCANTILE COMPANY GREENVILLE, MISSOURI	
Date	Date of invoice
To	Terms
Address	Due date
..... (Details of purchase entered on these lines)	
Approved as to extensions Approved as to quality of merchandise and prices Approved as to physical count of merchandise	 Bookkeeper Head of Department Receiving Clerk General Manager

FACE OF VOUCHER

Voucher No.....	
(Name of creditor)	
(Address).....	
Greenville Mercantile Company	
Greenville, Missouri.	
Paid by check No.....	
Date.....	
<i>Account charged</i>	
Merchandise Purchases	
Advertising	
Salaries of Sales Clerks	
Delivery Expenses	
Misc. Selling Expense	
Stationery and Postage	
Telephone and Telegraph	
Heat and Light	
Prepaid Insurance	
Office Salaries	
Traveling Expenses	
Misc. Administrative Expenses	
Sundry	
Total	

BACK OF A VOUCHER

A voucher register is frequently used instead of the purchases journal.—The voucher register is a part of a system known as the voucher system. Where this system is used, the Accounts Payable account in the general ledger is replaced by an account called *Vouchers Payable*. Before any payment is made whether for merchandise purchased or for any other purpose, a written authorization for the payment must be made by some responsible executive of

the business designated to make such authorization. The authorization is made on a voucher, which shows the person to whom the payment is due, the object of the expenditure, the account to be charged, the date of the invoice, what was received from the seller, the date when payment is due, and similar information. When the voucher is issued, a record of the voucher is entered in the voucher register as a credit to Vouchers Payable. The offsetting debit may be to any one of a number of accounts according to the nature of the expenditure. The voucher register is used to record many kinds of transactions besides merchandise purchases, and the Vouchers Payable account is used to show many kinds of liabilities which are not shown in the Accounts Payable account.

Where the voucher system is used, it is not necessary to keep an accounts payable ledger to show the amounts due to individual creditors, but the payments to be made are determined from the vouchers. After the voucher has been recorded in the voucher register, it is filed in a special file which is kept for unpaid vouchers. Each voucher is filed under the date on which it is to be paid. Each day as vouchers are paid, the paid vouchers are stamped "Paid," the number of the check with which each voucher was paid is recorded on the voucher, and the paid vouchers are filed in a Paid Voucher file. It can be seen that this system does not show the total amount due to any one creditor at any one time, but since each voucher is paid separately, this information is usually not needed. A greater objection to the use of this system is that the total amount purchased from each creditor for the year is not shown in any place in the accounts. Information as to the amount of purchases made from any one creditor may be valuable in securing satisfactory prices or terms of payment when purchases

are made in the future. If it is found that this information is needed, it can be obtained by compiling it from the paid vouchers or the purchase invoices which are filed with the vouchers.

The voucher register contains a number of debit columns according to the kinds of expenditures made.—The voucher register contains only one credit column since all transactions recorded in this journal are a credit to Vouchers Payable, but it contains a number of debit columns because the transactions recorded in the register may be debits to a number of accounts. Because of the great number of columns needed, the voucher register frequently extends over both the left side and the right side of the book. One form of the voucher register is illustrated on page 171.

The method of operation of the voucher register requires brief explanation. When a voucher is issued, the amount of the voucher is entered in the column headed Vouchers Payable, Cr. If the entire amount of the voucher is a debit to some one account, the amount is recorded in one of the expense columns or in the sundry debit column. If the amount is to be distributed among two or more of the expense accounts, entries are made in the appropriate debit columns. If an account for which no special column is provided is to be debited, the amount is entered in the sundry debit column and the name of the account is written in the space headed Name of Account. This space would be used, for example, to record vouchers issued for the purchase of any fixed assets or for the payment of a note payable to the bank which had come due. The deductions column is used if some allowance from the face of an invoice is received after the voucher has been issued or some error in the original invoice is discovered. If merchandise is returned to the vendor, this also will result in a deduction.

LEFT PAGE OF VOUCHER REGISTER

Date 1929	Voucher No.	Name of Payee	Address	Explan- ation	Terms	Vou- chers Payable Cr.	Pur- chases Dr.	Adver- tising Dr.	Sala- ries of Sales Clerks Dr.	Deliv- ery Ex- pense Dr.	Misc. Sell- ing Ex- pense Dr.
	1	Western Hardware Co.	11 Spring St.		2/10, n 30	145.50	145.50				
Dec.	1	Union Electric Co.	1935 Market	Elec. Lt.	Net	45.80					
	2	Daily News Co.	1450 Oak St.	Advertising	Net	18.00		18.00			

RIGHT PAGE OF VOUCHER REGISTER

[illegible]

The entry to record the return or the allowance is made in the purchases returns and allowances journal which is to be explained later, but notation is made in the deductions column in order that the proper amount to be paid at the date the voucher is due may be known. When the voucher is paid, an entry is made in the cash disbursements journal, which is to be explained in the next chapter, debiting Vouchers Payable and crediting Cash. The number of the check and the date of payment are entered in the Paid column of the voucher register as a cross reference with the cash disbursements journal. At any time the amount of the vouchers still unpaid may be determined from the vacant lines in the Paid column. This total should agree with the total of the vouchers in the unpaid vouchers file. Each of these records thus acts as a valuable check upon the other.

The posting of the voucher register is similar to the posting of the purchases journal. Only the items entered in the Sundry column need to be posted separately. The LF column is provided in order that the number of the account in the general ledger to which the posting is made may be noted. At the end of the month, all columns are totaled, and the total of all the debit columns should equal the total of the Vouchers Payable credit column. Each of the special columns is then posted to the proper page in the ledger, and the number of the account to which the total of the column is posted is indicated in parentheses either immediately before the total or underneath the total. The totals are then ruled across with double lines to indicate that the record for the month has been closed. The Sundry column is totaled in order that the total debits in the voucher register may be checked against the total of the credit column, but the total of this column is not posted as the items have been

posted individually during the month. The sundry column is ruled with double lines in the same way that the other columns are ruled, and a check mark (✓) is made opposite the total, instead of the folio number which is recorded for the other columns. The check mark means that the total not to be posted.

The voucher register has several advantages over the purchases journal.—One advantage is that a great deal of labor is saved in the posting, since no accounts with creditors are kept and the posting to expense accounts is greatly reduced. Another advantage is that expenditures are more carefully supervised by the executives of the business, since no payment can be made without the issue of a voucher which has been properly authorized. In a large business in which the executives cannot look after the details of the business, this is an important consideration. The voucher system has the disadvantage of requiring the preparation of a voucher for every payment made, and many small businesses consider this to be unnecessary labor. The voucher system is also unsatisfactory if many purchase allowances are received or many purchase returns are made, since the amount paid in such cases does not agree with the amount authorized by the voucher. For these reasons, many businesses prefer to use the purchases journal instead of the voucher register. The use of the purchases journal and the accounts payable ledger will be assumed in the later discussion except where the use of the voucher register is specifically mentioned.

A special journal called the *sales journal* is used to record sales on account.—The sales journal is used to record those transactions which result in a debit to Accounts Receivable and a credit to Sales. If the student understands the principles of the purchases journal and the voucher register,

and the method of entering transactions in these journals and of posting transactions from these journals to the accounts, he will have no difficulty in understanding the sales journal. It is important to note that the sales journal is used to record only sales on account. Sales for cash are recorded in the cash receipts journal. The simplest form of sales journal contains only one money column as illustrated.

SALES JOURNAL

Date		LF	Name of Customer	Amount		
1930 May	2	4	A. B. Wells	100.00		
	3	2	C. R. Madison	200.00		
	6	1	D. L. Embs	400.00		
	8	3	P. M. Weller	300.00		
	10	5	N. O. Wilcox	500.00		
				1,500.00		
				1,500.00		
		2	Accounts Receivable, Dr.			
		15	Sales, Cr.		1,500.00	

The LF column in this case refers to the page in the accounts receivable or customers' ledger. As in the case of the purchases journal, it is not necessary to indicate the ledger to which the posting is made since every entry in this journal is known to require a debit to the account of some customer. Only one debit entry is made to the Accounts Receivable account for the total credit sales of the

ACCOUNTS RECEIVABLE

1930		
May 31	SJ1	1,500.00

15

SALES

1930		
May 31	SJ1	1,500.00
31	CR1	358.25

The sales journal may have more than one money column.

—If there is more than one department of the business and the owners wish to know the profits of each, it will be necessary for them to know the sales, purchases, and beginning and ending inventory of each department. The method of keeping a record of the purchases of each department in the purchases journal was illustrated earlier in this chapter. The sales of the various departments may be recorded in a similar manner by the use of additional columns in the sales journal. The method is illustrated by the same sales transactions which we have just used, assuming that a part of the sales were in the furniture department and a part in the hardware department.

SALES JOURNAL

Date		LF		Accounts Receivable, Accounts Dr.	Hardware Sales Cr.	Furniture Sales Cr.
1930 May	2	4	A. B. Wells	100.00	100.00	
	3	2	C. R. Madison	200.00	75.00	125.00
	6	1	D. L. Embs	400.00	300.00	100.00
	8	3	P. M. Weller	300.00	160.00	140.00
	10	5	N. O. Wilcox	500.00		500.00
				<u>1,500.00</u>	<u>635.00</u>	<u>865.00</u>
	31	2	Accounts Receivable, Dr.		1,500.00	
		15	Hardware Sales, Cr.			635.00
		16	Furniture Sales, Cr.			865.00

The method of posting this sales journal is similar to the method of posting a purchases journal of more than one column. Each transaction entered in the sales journal is posted separately to the account of the customer in the customers' ledger. The columns are totaled at the end of

the month and the totals are posted to the accounts in the general ledger.

Special journals may be kept to record purchases returns and allowances and sales returns and allowances.—Purchases returns and allowances and sales returns and allowances may be entered in the general journal, or separate journals may be provided for each. The form and arrangement of the journals will vary according to the form and arrangement of the purchases journal and the sales journal respectively. That is to say, if the purchases journal provides columns for debits to Purchases and credits to Accounts Payable, the purchases returns and allowances journal should provide columns for debits to Accounts Payable and credits to Purchases Returns and Allowances or to Purchases. If the purchases journal has columns for debits to Hardware Purchases and Furniture Purchases, as well as credits to Accounts Payable, the purchases returns journal should have columns for credits to Hardware Purchases Returns and Allowances and to Furniture Purchases Returns and Allowances.

Sales Returns and Sales Allowances are not recorded in a single account, but two accounts are required. If the entries in the sales journal involve merely debits to Accounts Receivable and credits to Sales, the sales returns and allowances journal may conveniently be arranged as shown.

SALES RETURNS AND ALLOWANCES JOURNAL

Date		LF	Name of Customer	Sales Returns Dr.	Sales Allowances Dr.	Accounts Receivable Cr.
1930 June	1 9	3 1	P. M. Weller D. L. Embs	25.00	10.00	25.00 10.00

If the sales journal has columns in which Hardware Sales are recorded separately from Furniture Sales, the sales returns and allowances journal must provide columns in which the returns and allowances of the two departments can be recorded separately.

SALES RETURNS AND ALLOWANCES JOURNAL

Date	LF		Name of Customer	Hardware Sales Returns Dr.	Hardware Sales Allowances Dr.	Furniture Sales Returns Dr.	Furniture Sales Allowance Dr.	Accounts Receivable Cr.
1930 June	1 9	3 9	P. M. Weller D. L. Embs	10.00	10.00	15.00		25.00 10.00

The use of the voucher system does not affect the form of the sales returns and allowances journal but it does affect the form of the purchases returns and allowances journal. If the voucher system is used, this latter journal must have a column for Vouchers Payable, debit, which takes the place of the column for Accounts Payable, debit. The columns in the purchases returns and allowances journal therefore would be Vouchers Payable, Dr., Purchases Returns and Allowances of Hardware, Cr., and Purchases Returns and Allowances of Furniture, Cr.

QUESTIONS FOR DISCUSSION

1. What are the types of journals discussed in this chapter? What is the use of each?
2. How can one prove that the principle of equal debits and credits in the journal entries has been maintained when use is made of the purchases and sales journals?
3. Explain the nature of the document upon which the entry in the purchases journal is based. What should be done with this document after the entry is made? How can the documents be traced if wanted for reference?
4. Explain the voucher system. What advantage has it over an ordinary purchase journal?

5. Explain the nature of the document upon which the entry in the sales journal is based. What should be done with these after the entry is made? How can they be traced if wanted for reference?

6. What form of sales journal would you recommend to a business selling automobiles and trucks which wishes to classify its sales? How should the posting be done?

7. The A. B. Company sells merchandise for cash and on account. Should its cash sales be entered in the sales journal? If not, where should they be entered?

8. Explain the procedure followed in posting from the purchases journal; from the sales journal.

9. Sales invoices were formerly pasted in a book called a sales book. What do you think of this plan as compared with the use of a sales journal?

10. The A. B. Company purchases an office desk. The next day it sells an old typewriter. Should you place the entries in a purchase and sales journal, respectively? If not, where should you enter them?

11. What information particularly should be recorded in the purchase journal? In the sales journal?

12. A customer asks the bookkeeper of the A. B. Company how much his bill is. He is told \$10 and he pays it. Subsequently a bill for \$2 is sent him. How might this mistake have arisen? How could such mistakes be avoided in the future?

13. If purchases and sales are not posted until the end of the month, how is it possible to determine the amounts due from customers during that period?

14. What do you understand by "terms of purchase"; by "terms of sale"?

PROBLEMS

1. A fellow-student does not understand the advantages of purchases and sales journals. Write a report to him explaining the advantages of the purchases and sales journals, and the process of posting in each case.

2. C. A. Parker made the following purchases during the month of April:

- April 1 Bought of L. A. Metcalf, 27 Cleveland Avenue, terms 1/10, n 20 merchandise per Inv. No. 10, dated April 1, \$700
5 Bought of W. E. Arnold, 177 Lindon Avenue, terms 60 days, merchandise per Inv. No. 11, dated April 4, \$200
15 Bought of C. A. Williams, 518 Pine Street, terms 30 days, merchandise per Inv. No. 12, dated April 15, \$600

- April 17 Bought of Illinois Dry Goods Company, 20 Nelson Avenue, terms 2/10, n 30, merchandise per Inv. No. 13, dated April 16, \$500
- 20 Bought of J. C. Ring, 500 South Avenue, terms, on account, merchandise per Inv. No. 14, \$1,700
- 23 Bought of P. R. Tufts, 17 Maxwell Place, terms 1/10, n 30, merchandise per Inv. No. 15, \$200
- 28 Bought from Miller Brothers, 28 Clark Street, terms, 60 days, merchandise per Inv. No. 16, \$300

Rule a purchase journal and enter the transactions. Set up the necessary accounts and post the transactions. Preserve for future use.

3. The following are the sales of H. D. Thompson for the month of August:

- August 1 Sold B. A. Anderson, 200 Pine Street, Chicago, merchandise on account, per order 25, \$30
- 5 Sold T. E. Evans, Oak Park, 60 days, merchandise per order 26, \$10
- 10 Sold M. R. Hall, Evanston, terms 30 days, merchandise per order 27, \$50
- 12 Sold Commercial Hotel, Blue Island, terms 2/10, n 30, merchandise per order 28, \$15
- 15 Sold A. B. Block Company, Argo, terms 30 days, merchandise per order 29, \$20
- 20 Sold T. R. Moore, 300 Locust Street, Chicago, terms 30 days, merchandise per order 30, \$18
- 25 Sold A. E. Miller, South Chicago, terms 10 days, merchandise per order 31, \$15
- 28 Sold W. W. Johnson, Zion City, terms 30 days, merchandise per order 32, \$12

Rule a sales journal and enter the transactions. Set up the necessary accounts and post the transactions. Preserve for future use.

REFERENCES FOR FURTHER STUDY

- THE PURCHASE AND SALES JOURNALS: Kester, *Accounting Theory and Practice*, 3d. ed., Vol. I, pp. 156-167
- MISCELLANEOUS BOOKS OF ORIGINAL ENTRY: Scovill, *Elementary Accounting*, Part One, pp. 191-218

CHAPTER XIII

THE CASH JOURNALS

PURPOSES OF THIS CHAPTER

1. To explain the method of entering and posting cash receipts and cash disbursements
 2. To explain the method of recording small cash payments
-

The journals included in the purchases and sales groups of journals are not the only ones which the accountant finds useful. Two others which will be discussed in this chapter are the cash receipts journal and the cash disbursements journal. These two journals together are frequently spoken of as *the cash book*. However, it will be necessary to consider them separately as they are in reality separate journals.

The cash receipts journal is used to record all receipts of cash.—The cash receipts journal is similar in principle to the journals illustrated and explained in the preceding chapter. Special columns are used for the entry of items of like nature, the totals of these columns being posted to the accounts at the end of the month instead of each item being posted separately to two or more accounts. A simple form of cash receipts journal is illustrated on the next page.

In this journal, the debits are all to Cash, but the credits are to various accounts. In the illustration, the credits were to three accounts in the general ledger; the student can readily think of a number of other accounts which might possibly have been credited. These various credits are

CASH RECEIPTS JOURNAL

Date		LF	Account Credited	Explanation	Amount
1930					
Jan.	2	35	A. B. Anderson, Capital	Original Investment	3,000.00
	4	G2 AR3	Accounts Receivable, T. E. Adams	Cash on account	200.00
	6	41	Sales	Cash sales for the day	100.00
	9	G2 AR5	Accounts Receivable, S. E. Smith	In full of account	150.00
	10	41	Sales	Cash sales for the day	50.00
		1	Cash,	Dr.	3,500.00

taken care of by having one money column in which the amount of cash received is entered, the name of the account to be credited being written in the third column of the journal. The credit is posted at once, and the debit to Cash is posted in total at the end of the month. Cash received from customers in payment of their accounts must be posted twice, once to the credit of the customer's individual account in the accounts receivable ledger, and once to the controlling account for accounts receivable in the general ledger. These postings are made from the information given in the column headed "Account Credited." Two folio references are given to show that both postings have been made, general ledger postings being indicated by the letter *G* and customers' ledger postings being indicated by the abbreviation *AR*.

For a business of large size, the use of this form of cash journal may require too much time and labor. A further economy in the entering and posting of cash transactions may be effected by the use of additional money columns. For example, a column may be used for entering the credits to Sales, also one for the credits to Accounts Receivable.

If there are any other accounts to be credited, they may be taken care of by a miscellaneous column. This form of journal is as follows:

CASH RECEIPTS JOURNAL

Date	LF	Account Credited	Sales Cr.	Accounts Receivable Cr.	LF	Miscellaneous Cr.	Cash Dr.
1930 Jan.	2				35		
	4	AR3 A. B. Anderson, Cap.		200.00		3,000.00	3,000.00
	6	Accounts Receivable					200.00
	9	Sales	100.00	150.00			100.00
	10	AR5 Accounts Receivable	50.00				150.00
		Sales					50.00
			<u>150.00</u>	<u>350.00</u>		<u>3,000.00</u>	<u>3,500.00</u>
			<u>3,500.00</u>				
	31	1 Cash Dr.					
		41 Sales Cr.		150.00			
		2 Accounts Receivable Cr.		350.00			
		Miscellaneous Cr.		3,000.00			

The use made of this journal is not difficult to understand. In the first place, it should be noted that since all cash received is a debit to Cash, an entry in the Cash Dr. column must be made each time cash is received. This column is totaled at the end of the month and the total amount of cash received is then entered on the debit side of the Cash account. When the cash is received from cash sales, the credit is to Sales, the amount being entered in the column headed Sales, Cr. No posting is made of such entries until the end of the month when the total of this column is posted to Sales. Cash received from customers on account is a credit to the customer and also, of course, to the controlling account. The amount is therefore entered in the column headed Accounts Receivable, Cr. Posting is made to the controlling account at the end of the month, but the credit to the individual's account may be posted at any time since each such credit must be posted separately in any case. When an account is to be credited for which there is no special column, the amount is entered in the

Miscellaneous column. Items entered in this column must be posted separately, and a separate ledger folio column is provided in which the number of the account to which the item was posted may be recorded. At the end of the month, all columns are totaled. Of course, the sum of the totals of the credit columns must equal the total of the debit column. These totals are then posted, with the exception of the Miscellaneous column, the items of this column having already been posted.

The form of the cash receipts journal must be modified to suit the needs of the individual business.—Many firms do not make sales for cash but sell only on account. This is true of most wholesale houses and manufacturing companies. The column provided for Sales credit in the cash receipts journal may, therefore, be eliminated for these concerns. Such companies usually allow a sales discount, however, and this fact introduces an additional complication which must be provided for in the cash journal. It will be recalled that when a customer makes a remittance of cash on an account on which he is allowed a cash discount, the entry involves the following debits and credit, assuming that the face of the account was \$100.00.

Cash, Dr.	98.00	
Sales Discounts, Dr.	2.00	
Accounts Receivable, Cr.		100.00

In this entry the debits are shown first, followed by the credit which is indented a little to the right. This is the form used in making entries in the general journal which is to be discussed in a later chapter. This form is used here only as a convenient method of showing the debits and the credits. To provide for this entry in the cash book, it is necessary merely to add a column headed Sales Discounts, Dr.

Another complication arises from the necessity of record-

ing deposits in banks. Many firms keep very little cash on hand but deposit in the bank each day the cash received on that day. If all the cash received is deposited each day, the Cash Dr. column in the journal as illustrated may simply be changed to read Bank Dr. An account with the bank may be provided in the ledger, all deposits in the bank being a debit to the bank and all checks drawn being a credit to the bank. If deposits are made at irregular intervals, this plan must be slightly modified, as follows: The form of the journal is exactly as shown in the last illustration except that an additional column is provided for the entry of the amounts deposited. At the end of the month, the deposits column is totaled, and this total is posted to the debit of the bank and the credit of Cash. Of course, it is necessary to know the balance on deposit with the bank continuously during the month. A record of the bank balance may be kept on the check stubs, however, thus eliminating the necessity of the postings to the ledger account with the bank until the end of the month.

When cash is deposited in the bank every day, it is desirable that the record of cash deposited agree with the cash book record of cash received. This result may be approximated by depositing each day's receipts as soon as the bank opens the next morning, though in this case there is a difference of one day between the record of cash received as shown by the cash book and the record of bank deposits as shown by the deposit slips and the bank statement. A more potent objection to the practice of waiting until the next morning to deposit the cash, however, is that the collection of checks is unnecessarily delayed. These objections are overcome by the plan of closing the cash book late in the afternoon and making all deposits of the day's receipts just before the bank closes. Cash received after the cash book

is closed for the day is entered as having been received on the following day.

All cash received should be entered in the cash receipts journal.—In the plan of making entries in the special journals which has been outlined, only sales on credit are entered in the sales journal, while sales for cash are entered in the cash receipts journal. It would be possible to provide a column in the sales journal for Cash Dr. in which the cash received from sales could be entered. This would not be wise, however, because cash is the most elusive thing in a business, and it is necessary to have the best possible check on its receipt and disbursement. The accuracy of the record of cash can be most easily checked if all records of cash receipts and disbursements are kept in one book. Also it is necessary for a business to know at all times just how much cash is available for meeting debts as they come due. For these reasons, the entries for cash sales are made in the cash receipts journal and not in the sales journal. At any time when an entry involving cash may be made in either of two journals, as in cash sales transactions just discussed, the cash book takes precedence, and the entry is made in the cash receipts journal or the cash disbursements journal as the case may be.

The cash disbursements journal is used to record all disbursements of cash.—The operation of the cash disbursements journal is similar in many respects to the operation of the other journals, which has been explained. A simple form of cash disbursements journal is illustrated on the next page.

When a journal of this form is used, each item must be posted separately to the debit of the proper account, while the credit is posted in total at the end of the month. Where a controlling account is to be debited, such as Accounts Payable, the debit, of course, must be posted twice, once to

CASH DISBURSEMENTS JOURNAL

Date		LF	Account Debited	Explanation	Cash Cr.
1930 Jan.	5	7	Furniture and Fixtures	Desk and chair	25.00
	6	13	Advertising	Insert in Daily News	5.00
	7	16	Office Salaries	Bookkeeper's salary	40.00
	9	11	Purchases	Mdse. for cash	100.00
	15	14	Delivery Expense	Delivery boy	10.00
	31	1	Total, Cash Credit		180.00

the controlling account and once to some account in the subsidiary ledger. The labor may be reduced by the introduction of additional columns, as in the cash receipts journal. One form of the divided column cash disbursements journal is set up as follows:

CASH DISBURSEMENTS JOURNAL

Date		LF	Account Debited	Accounts Payable Dr.	Purchases Discount Cr.	LF	Miscellaneous Dr.	First National Bank Cr.	Cash Cr.
1930 May	2	1	Simmons Hdw. Co.	675.00	13.50			661.50	
	3	2	American Shoe Co.	500.00	10.00			490.00	
	7		Office Salaries			18	25.00		25.00

There are several things about this journal which should be noted. The two ledger folio columns are needed because the first is used to note the numbers of the accounts in the creditors' ledger to which posting is made, while the second is used to note the numbers of the accounts in the general ledger to which the items entered in the miscellaneous column are posted. Three credit columns are needed, one for the bank, one for Cash, and one for Purchases Discounts. If payment of an amount due is made by check, the credit is to the Bank and the amount is entered in the bank column. If payment is made in cash, the Cash account is credited and the amount is entered in the column headed

Cash, Cr. If the business keeps accounts with two or more banks, a column may be used for each bank. However, the Cash account in the ledger may be used to show the total cash on hand and in the bank, additional records being kept elsewhere of the cash on hand and in the various banks. The record of the balance on deposit with each bank, as previously pointed out, may be kept on the check stubs. If this system is used, the column for First National Bank, credit, is not needed.

The cash disbursements journal under the voucher system differs very little from the form of the journal just illustrated. Instead of the Accounts Payable, debit column, there is a Vouchers Payable debit column. The column for Miscellaneous, debit, also is not needed since no payment is made without first issuing a voucher which is recorded as a credit to Vouchers Payable, in the voucher register, and all payments are, therefore, debits to Vouchers Payable. The money columns needed are Vouchers Payable, Dr., Cash Cr., and Purchases Discount, Cr.

A check register frequently takes the place of both the cash disbursements journal and the Cash account.—Many firms follow the practice of making all payments by check. Under this system, if purchases are made for cash, they are first entered in the purchases journal as a debit to Purchases and a credit to Accounts Payable, and the check, which is immediately given in payment, is entered as a debit to Accounts Payable and a credit to Cash. Cash purchases, however, are not numerous. If any expenses are to be paid, a check is drawn in payment. In this way, an effective control over cash disbursements is established, for the endorsement on the check is acknowledgment from the creditor that payment has been received. Any one who audits or checks the record of transactions has assurance

that the payment has been made to the proper person. The change which this system makes in the special journals is that there is no longer any need for a column for Cash, Cr. in the cash disbursements journal, and this journal becomes in reality a register of the checks drawn by the treasurer. Such a record is frequently called a *check register*.

If the cash is deposited in the bank every day, as best practice shows that it should be, the check register may be slightly altered so that it shows the bank balance. The necessity for a Cash account in the ledger is then eliminated. The only object in keeping a Cash account is to show the amount of cash on hand; and if this information can more conveniently be obtained from some other record, the Cash account becomes unnecessary. Only slight changes in the form of the cash disbursements journal, as already explained, are needed to make it possible to show in this journal the balance on deposit in the bank. The addition of two columns, one for bank deposits and one for the bank balance, is all that is necessary.

CHECK REGISTER

Date	Ck. No.	LF	Account Debited	Ac- counts Pay- able Dr.	Pur- chase Dis- counts Cr.	LF	Miscel- lane- ous Dr.	First Na- tional Bank Cr.	De- posits	Balance
1930 Jan.	1									1,560.00
	2	1	James Monroe	75.00	1.50			73.50		1,486.50
	2	2	J. Donaldson	50.00	1.00			49.00		1,437.50
	3								250.00	1,687.50
	7	3	Sales Salaries			23	100.00	100.00		1,587.50

When the bookkeeper prepares the balance sheet at the end of the month, he finds in the last column of the check register the amount of the bank balance which is to be shown as Cash on the balance sheet. The check register thus replaces the regular Cash account.

The petty cash book is used to record small cash payments.—While the petty cash book is not a book of original entry, it may best be explained in connection with the other cash records. It must be kept clearly in mind, however, that the petty cash book now to be explained is nothing more than a memorandum record and that it does not displace any book of original entry.

It is not always possible for a business to make every payment by check. All large payments may be made in this way, but it may be desirable to make small payments in cash. This is true, for example, of payments for meals for the driver of the delivery truck, stamps, telephone calls, or small items of office supplies, or other supplies. It is possible, however, to make such payments in cash and still follow the rule of depositing in the bank each day all the cash received on that day. Nor is it necessary to maintain a Cash account in the ledger to record such payments.

The fund out of which small cash payments are made is called the *petty cash fund*. It is created by drawing a bank check, made payable to the cashier who is to handle the fund, the check being entered in the check register or the cash disbursements journal as a debit to Petty Cash and a credit to the bank. An account called Petty Cash is opened in the ledger to which this debit is posted. Under the system called the *imprest* system which is to be explained here, no further entries need be made in the Petty Cash account except when permanent changes are made in the size of the fund. When the petty fund cashier makes a payment from the petty cash fund, he takes a receipt and enters the amount in the petty cash book. If the amount of the petty cash fund was originally \$25.00, the cashier may continue to make payments up to a total of \$25.00 before any entry is made in any record other than the memorandum

record. Since receipts are taken for all payments made, the sum of the receipts plus cash still in the fund should always equal \$25.00. When the fund begins to run low, the petty fund cashier takes the receipts to the main cashier and receives in exchange for them another check to the exact amount of the receipts. Thus the fund is still \$25.00. No entry is made in the Petty Cash account in the ledger because the fund is unchanged. When the cashier issues the check to replenish the fund, an entry is made in the cash disbursements journal or the check register, debiting the expenses for which the payments have been made, and crediting the bank. If the voucher system is in use, a voucher is issued to cover the expenses and the voucher is entered in the voucher register as a debit to the various expenses and a credit to Vouchers Payable. Thus the expenses are recorded in one of the books of original entry already explained.

It is necessary, however, for the petty fund cashier to keep some record of payments other than the receipts taken. This record is the petty cash book.

PETTY CASH BOOK

Date	Explanation	Receipts	Disbursements			
			Postage	Delivery Expense	Misc. Office Expense	Misc.
1930 Jan.	3 Fund Established	25.00				
	3 Postage		3.00	2.00		
	5 Dinner for drivers					3.50
	10 Express on Mdse.		5.00			
	15 Postage					.45
	16 Local telephone calls			5.00		
	18 Dinner for drivers				1.00	
	20 Pen points, pencils, etc.				4.50	
	21 Late suppers for office force					
		<u>25.00</u>	<u>8.00</u>	<u>7.00</u>	<u>5.50</u>	<u>3.95</u>
		.55				
22	Balance	24.45				
22	Check to replenish fund					

The petty cash book which is illustrated shows that on January 3, a check of \$25.00 was drawn to establish the petty cash fund. At that time an entry was made in the cash disbursements journal debiting Petty Cash and crediting Cash or Bank, according to the method used in this particular business. As the disbursements were made from the petty cash fund, notations were made in the petty cash book, but no formal entries were made in any journal. On January 22, the fund was almost exhausted, and a check was drawn for \$24.45 which restored the fund to its original amount, namely, \$25.00. When this check was drawn, an entry was made in the cash disbursements journal debiting the various accounts named in the petty cash book and crediting Cash. The debits recorded in this entry are Stationery and Postage, \$8.00, Delivery Expense, \$7.00, Miscellaneous Office Expense, \$5.50, Freight In, \$3.50, and Telegraph and Telephone, 45 cents. Thus, no entry is made in the Petty Cash account except when the fund is established or when the amount of the fund is permanently increased or decreased. If it is found that a petty cash fund of \$25.00 is not large enough but that the fund ought to be \$35.00, a check is drawn for \$10.00, and an entry is made in the cash disbursements journal debiting Petty Cash \$10.00 and crediting Cash \$10.00.

QUESTIONS FOR DISCUSSION

1. A local store buys both for cash and on account. It pays various operating expenses in cash rather than by check. It makes sales for cash and also receives cash on account, though it allows its customers no sales discounts. What kind of cash book do you recommend for this business?

2. The City Wholesale Company sells only on account. It allows its customers a discount for cash within ten days, but receives little cash from other sources. It pays all expenses and accounts by check. What kind of cash book does this business need?

3. The bookkeeper of the Ward Trading Company has difficulty in analyzing the cash transactions into their debits and credits. How may he reason out the process?

4. The treasurer of the United Department Store counts the cash at the close of each day, determines the amount of the bank balance, and compares the total cash on hand with the balance determined from the cash book. How might a difference between the cash on hand and in the bank and the balance as shown by the cash records arise? What steps would you take to locate the error?

5. The Spring Manufacturing Company wishes to adopt a system of making all cash payments by check but finds that some small payments can most conveniently be made in cash. Explain a system which will meet the needs of the company.

6. The bookkeeper of a grocery store asks you whether it is necessary for him to give an explanation for every entry made in the cash book, saying that it often seems unnecessary. For example, he says that no explanation is needed for cash sales. What would be your advice to him?

PROBLEMS

1. The following cash transactions were made by the business of T. A. Haywood during the month of March, 1930:

- | | | |
|-------|----|--|
| March | 1 | T. A. Haywood invested, \$3,000 |
| | 2 | Paid for office rent, \$90 |
| | | Received from Price and Co., on account, \$300 |
| | 4 | Paid Drug Company, on account, \$120 |
| | 6 | Received from cash sales, \$160 |
| | | Purchased merchandise, \$44 |
| | 8 | Received from A. R. White, on account, \$72 |
| | 10 | Paid for drayage on merchandise, \$22 |
| | 12 | Purchased merchandise on account, \$35 |
| | 15 | Paid sales clerk hire, \$25 |
| | | Salesmen's expenses, \$62 |
| | | Advertising, \$10 |
| | 16 | Received from cash sales, \$125 |
| | 18 | Received from G. A. Grant, on account, \$75 |
| | 20 | Cash sales, \$100 |
| | | Paid Price and Co., on account, \$33 |
| | 22 | Received from B. A. Hartman, on account, \$40 |

- March 22 Paid freight and drayage on merchandise, \$12
25 Paid for advertising expense, \$5
 Paid delivery boy, \$2
 Paid for stamps, \$1
27 Cash sales, \$89
 Received from A. L. Jones, on account, \$20
30 Received from R. E. Carpenter, on account, \$35
31 Paid for heat and light, \$20
 Paid salesmen's expenses, \$62
 Paid administrative expenses, \$53

- (1) Rule a cash book and make the entries.
- (2) Foot and rule the cash book.
- (3) Set up the necessary accounts and post the entries.
- (4) Preserve for future use.

2. The following are the cash transactions for F. L. Perkins for the month of April, 1930:

- April 1 F. L. Perkins invested \$1,500 in a retail clothing store
2 Bought merchandise for cash, \$725
5 Paid rent in advance, \$50
7 Cash sales to date, \$62
 Paid for sales clerk hire, \$7
8 Received \$5 from G. A. Gilman in full of account
9 Paid Barlow and Company, \$25 on account
12 Cash sales were \$125
14 Paid Erwin and Company \$17 on account
15 Paid for sales clerk hire, \$7
 Paid for office clerk, \$10
17 Paid W. A. Clinton \$35 in full of account
 Paid \$4 for stamps and stationery
18 Received from W. A. Burton on account, \$23
 Cash sales, \$205
21 Paid sales clerk, \$7
 Paid for delivery, \$3
22 F. L. Perkins withdrew for personal use, \$37
23 Received from R. A. Post in full of account, \$63
25 Cash sales, \$186
28 Paid Buck and Co., on account, \$172
30 Received on account from C. O. Davidson, \$75

April 30 Paid sales clerk, \$7
Paid office clerk, \$10
Paid for delivery, \$2
Paid for heat and light, \$4

- (1) Rule a cash book and make the entries.
- (2) Foot and rule the cash book.
- (3) Set up the necessary accounts and post.
- (4) Preserve for future use.

REFERENCES FOR FURTHER STUDY

THE CASH JOURNALS: Kester, *Accounting Theory and Practice*, 3d. ed., Vol. I, pp. 168-182

OPERATION OF CASH and BANK: Scovill and Bailey, *Elementary Accounting*, Part Two, pp. 181-216

CHAPTER XIV

THE NOTES RECEIVABLE AND NOTES PAYABLE JOURNALS

PURPOSES OF THIS CHAPTER

1. To show the information which must be recorded about each note receivable and note payable
 2. To explain the method of entering the information in the notes journals
-

Next to be discussed are the two notes journals. These are the notes receivable journal and the notes payable journal. Before these journals can be understood it is necessary to understand what is included in the terms notes receivable and notes payable as used in the accounts.

The terms *notes receivable* and *notes payable* are usually interpreted as including promissory notes, time drafts, and trade acceptances.—Strictly speaking, the terms *notes receivable* and *notes payable* should be restricted to promissory notes, but other items are frequently included as notes receivable or notes payable because the amounts are not large enough to justify separate accounts for them and because in many cases the difference between the items is only in the form of the promise to pay. Thus time drafts and trade acceptances as well as promissory notes are frequently entered in the accounts as notes receivable or notes payable.

A promissory note is a promise by one person to pay a sum of money to another person or to some one who may be designated by him. In legal terms, it is an “unconditional

promise in writing made by one person to another, signed by the maker engaging to pay on demand or at a fixed or determinable time a sum certain in money to order or to bearer." The usual form of promissory note, as shown below, conforms with this definition.

<u>\$150.00</u>	<u>Greenville, Ill., March 20, 1930.</u>
<u>Thirty days</u> after date <u>I</u> promise to pay	
to the order of <u>John Doe and Company</u>	
<u>One Hundred Fifty no/100</u> Dollars	
at <u>First National Bank of Greenville</u>	
Value received <u>with interest at six (6) per cent per annum</u>	
<u>Frank Smith</u>	

PROMISSORY NOTE

The promissory note is used in business in obtaining loans from banks and also at times in the purchase of merchandise. If a debtor is unable to pay an account when it comes due, he may borrow from his bank by giving a promissory note or he may give a promissory note to his creditor, if the creditor is willing to accept it. The promissory note has certain advantages over the open account, though, of course, in the final analysis the value of any note receivable depends upon the ability of the debtor to pay. The advantages of the promissory note to the creditor are as follows:

1. The note contains a written admission of the debt. It is, therefore, easier to prove at law the existence of the debt.
2. The amount of the debt is stated in the note and is, therefore, easier to prove.

3. A promissory note usually bears interest, whereas the open account usually does not.

4. The promissory note is more easily assigned than is an open account. This means that if the creditor wishes to have his money before the note matures, or comes due, he may easily endorse the note to a bank or some one else and receive cash for it, whereas it is not quite so easy to sell an account receivable.

A draft is a written order by which one party directs another to pay a sum of money to a third person. The most common form of draft is an ordinary bank check, which is an order drawn by the depositor, ordering the bank to pay a stated amount to a third person. Of course, a check is considered cash in business and therefore is not recorded as a note receivable. If the draft directs that the payment be made at some future date, however, the person on whom the draft is drawn shows it in his accounts as a note payable, while the person who holds it enters it as a note receivable. An order of this kind is called a *time draft*.

<u>\$150.00</u>	<u>Chicago, Ill., March 20, 1930.</u>
<u>One month after date</u> pay to the order of <u>James Manufacturing Company</u>	
<u>One hundred fifty no/100</u> Dollars	
with interest at the rate of six (6) per cent per annum Value received and charge to the account of To <u>Frank Smith</u> <u>Greenville, Illinois</u> <u>John Doe and Company</u>	

TIME DRAFT

The origin of the draft which is illustrated is indicated by the form of the instrument. The draft shows that Frank Smith owed John Doe and Company \$150.00, while John Doe and Company owed the James Manufacturing Company a like amount. John Doe and Company, therefore, drew the draft on Frank Smith, ordering him to pay that amount to the James Manufacturing Company. We will indicate the entries to be made on the books of each party to the transaction. First, on the books of John Doe and Company, the James Manufacturing Company is debited and Frank Smith is credited because now Frank Smith is to pay the James Manufacturing Company, thereby relieving John Doe and Company of the necessity of meeting their debt. Second, on Frank Smith's books, John Doe and Company is debited and Notes Payable is credited. Finally, on the books of the James Manufacturing Company, Notes Receivable is debited and John Doe and Company is credited. It should be noted that in order to make this draft a legal obligation of Frank Smith, the draft would have to be sent to him for his acceptance. He would signify his willingness to pay it by writing the word "Accepted" across the face of the instrument and signing his name, thereby changing the draft into an acceptance.

A trade acceptance is a draft which arises from a sale of goods, whereas the ordinary draft, as was indicated in the preceding paragraph, may be issued in the settlement of any debt. The trade acceptance bears on its face the statement that "the obligation of the acceptor hereof arises out of the purchase of goods from the drawer." The trade acceptance differs from the ordinary draft or acceptance also in that there are usually only two parties to the former. If, for example, John Doe and Company had drawn a trade acceptance on Frank Smith as soon as the merchandise was

sold to him, the instrument would have appeared as shown below. Should John Doe and Company wish to settle their obligation with the James Manufacturing Company, they may endorse this trade acceptance over to their creditor.

<u>Chicago, Illinois, February 20, 1930.</u>	
<u>Two months after date</u>	pay to the order of OURSELVES
<u>One Hundred Fifty no/100</u>	Dollars
<u>with interest at six (6) per cent per annum</u>	
The obligation of the acceptor hereof arises out of the purchase of goods from the drawer. The drawee may accept this bill payable at any bank, banker, or trust company in the United States which he may designate.	
To <u>Frank Smith</u>	
<u>Greenville, Ill.</u>	<u>John Doe and Company</u>
By <u>John Doe</u>	

TRADE ACCEPTANCE

Notes, drafts, and trade acceptances serve essentially the same purpose. A debt arising out of the purchase and sale of goods may be converted into a written promise to pay by means of any one of these instruments. A note, a draft, or a trade acceptance may be given at the time of the purchase of the goods or at the expiration of the usual credit period. Trade acceptances are used, in the United States, in only a few lines of business.

All notes receivable are recorded in a notes receivable journal before being entered in the accounts.—The notes receivable journal is used to record the notes, time drafts, and trade acceptances received by the business. All such

instruments, which may properly be included under the term notes, are debits to the Notes Receivable account; and by entering the notes in this journal as they are received from customers or others during the month, it is possible to post the total of the notes to the debit of the Notes Receivable account at the end of the month as a single item. The notes are usually received from customers in settlement of their accounts, and the credit will, therefore, usually be to Accounts Receivable. In some cases notes are given by customers at the time the sale is made, and in such cases the account to be credited is Sales. Occasionally a note may be received in return for some fixed asset which is sold, in which case the credit will be to the fixed asset account. The notes receivable journal provides columns for obtaining the total debit to Notes Receivable and the total credit to Accounts Receivable. Miscellaneous credits, such as to Sales or to the fixed assets accounts, are entered in the column headed General Ledger Credit. Of course such miscellaneous credits must be posted individually to the credit of the appropriate account in each case. Any credits to Accounts Receivable must also be posted individually to the credit of the customer in the Accounts Receivable Ledger. A ledger folio column is provided for entering the number of the account where separate posting is necessary.

In addition to showing the names of the accounts to be debited and credited, the notes receivable journal shows a great deal of additional information relative to the notes receivable owned by the business. The nature of this information is obvious from an examination of the form of the notes journal.

In some businesses, the notes receivable are not sufficiently numerous to justify the keeping of a separate journal to record them. In such cases, it is still necessary to keep a

notes receivable register in order that all facts pertaining to each note may be available in some convenient record. The note register is similar to the notes receivable journal except that it does not contain columns for the debit and credit of accounts. Debits and credits to the ledger accounts in such cases are recorded in the general journal which is to be explained in the next chapter. The notes receivable journal or the notes receivable register usually extends across two pages because of the many facts which must be shown.

[illegible]

Information of a more detailed nature is recorded on the other side of the notes receivable journal:

[illegible]

Adjustments for interest must frequently be made in connection with the recording of notes receivable.—It will be observed that the notes receivable journal contains two columns for interest income, one of which is for debits to this account and the other for credits. The use of these columns must be explained in some detail. When notes are received from customers, the credit to the account of the customer is not, in every case, for the exact amount of the face of the note. Two cases where the customer would not be credited with the amount of the note will be mentioned. In the first case, we shall assume that George Brown owes Yates and McClure \$97. The debt is due now, but Brown does not have the money to pay. He agrees to give a note for \$100 due six months after date without interest. Since the note does not bear interest, it is obvious that the \$3 added to the amount due is interest, this being included in the face of the note. Notes receivable are always recorded at face value, and this note, therefore, must be recorded as a debit to Notes Receivable for \$100. George Brown is credited with \$97, while Interest Income is credited for \$3.

In the second case, the credit to the customer is not for the exact amount of the face of the note, for interest has already accrued at the date when the note is received. To illustrate, James Webb owes Yates and McClure \$50. He holds a note signed by E. Kinney which Kinney gave three months ago. This note is for \$40, bears interest at the rate of 6%, and runs for an additional six months. Webb endorses this note over to Yates and McClure in part payment of his account. Since interest has already run on the note, or as the accountants say, has accrued, for a period of three months, the note is worth more than its face value. Yates and McClure may accept the note at face value and accrued interest, the accrued interest being \$.60. Webb

is therefore credited with \$40.60. The complete entry, to be made when the note is accepted, is debit Notes Receivable \$40 for the face of the note; debit Interest Income \$.60; credit James Webb \$40.60. The debit to Interest Income will be offset by a credit to Interest Income when the note is collected at maturity, the amount of interest which will be collected at that time being \$1.80. The Interest Income account will, therefore, show a debit of \$.60 and a credit of \$1.80, the balance of the account, \$1.20, being the amount of interest income earned by Yates and McClure during the period they held the note.

When notes receivable are paid, the entry to record the cash received is made in the cash receipts journal. This entry is a debit to Cash, a credit to Notes Receivable for the face of the note, and a credit to Interest Income for the interest. If Interest Income is credited at the time the note is received, as is the case where the note is noninterest bearing, and the maker of the note or the person who endorses the note to the business is credited for less than the face of the note, Interest Income obviously should not be credited a second time when the payment is received. Since only the face of the note is paid at maturity in such cases, the entry in the cash receipts journal is merely a debit to Cash and a credit to Notes Receivable for the face of the note. The only record of the payment of the note in the Notes Receivable journal is a notation in the Remarks column to the effect that the note has been paid.

All notes payable are first entered in a notes payable journal.—The notes payable journal serves a purpose similar to that of the notes receivable journal. It is a convenient record for entering all notes payable in order to obtain the total credit to the Notes Payable account for the month, and it shows the essential information about each note.

The notes payable journal provides columns for recording credits to Notes Payable and debits to Accounts Payable and to General Ledger or Miscellaneous accounts. A note given for a fixed asset, such as a delivery truck, would be shown as a credit to Notes Payable in the Notes Payable Credit column and as a debit to Delivery Equipment in the General Ledger Debit column. The debit would have to be posted separately to the Delivery Equipment account, while the credit to Notes Payable would be posted in total at the end of the month. Other transactions requiring debits to accounts for which a special column is not provided would be handled in the same way.

The method of recording notes payable issued to the bank for cash loans requires special attention. Such a transaction results in a debit to Cash and a credit to Notes Payable. The debit to Cash must be entered in the cash receipts journal, however, for all cash received is recorded there in order that the treasurer may know at all times the amount of the bank balance. The credit to Notes Payable must be entered in the notes payable register, for all information pertaining to notes which the business has outstanding must be shown in this journal. Therefore, a note issued to the bank in obtaining a loan must be entered in both the cash receipts journal and the notes payable journal. Since only one debit and one credit should be posted to the accounts, the credit to Notes Payable is not posted from the cash book, a check mark being made in the ledger folio column to indicate that the credit will be posted from the notes payable journal. In the same way the debit to Cash is not posted from the notes payable journal but a check mark is made in the folio column. This device is used wherever it is necessary to record a transaction in more than one journal.

Some businesses do not keep a special journal for recording the notes payable which they issue, the notes being entered and posted from the cash receipts book or the

LEFT PAGE OF NOTES PAYABLE JOURNAL

Date	Our No.	LF	In whose favor Dr.	Face of Paper Notes Pay Cr.	Interest Expense Dr.	Acct. Pay. Dr.	Gen'l. Ledger Dr.	Drawer

RIGHT PAGE OF NOTES PAYABLE JOURNAL

Date of Paper		Time to run	Rate of Int.	When Due												Where Payable	Date of Payment
Year	Mo. and Day			Yr.	J	F	M	A	M	J	J	A	S	O	N			D

general journal in a manner similar to that noted in connection with the discussion of the method of handling notes receivable. In the same way also, it is necessary to maintain a notes payable register to record facts relative to the notes which are issued. The notes payable register, which

is not used as a posting medium, is similar to the form of the notes payable journal except for the omission of some of the columns in which debits are entered.

Adjustments for interest must frequently be made in connection with the recording of notes payable.—It will be observed that the notes payable journal contains a column headed Interest Expense, Dr. This column is used when interest is paid in advance at the time the note is issued. To illustrate, assume that Yates and McClure obtained a loan from the bank, giving a six months non-interest bearing note for \$1,000; that is, a promise to pay \$1,000 six months after date without interest. Of course, the bank will not make a loan without receiving interest, and it merely deducts the interest from the face of the note at the time the loan is made. If the rate agreed upon is six per cent, the interest which would be deducted is \$30. The bank thus credits the deposit account of Yates and McClure with \$970. The entry made by Yates and McClure is debit Cash \$970, debit Interest Expense \$30, credit Notes Payable \$1,000. If a note of this sort is given to a creditor in payment of an account, the entry is the same except that Accounts Payable is debited \$970 instead of Cash being debited.

When a note payable is paid, the entry to record the payment is made in the cash disbursements journal. If interest is paid on the note, the entry is a debit to Notes Payable for the face of the note, a debit to Interest Expense for the interest, and a credit to Cash for the total amount paid. If the note is noninterest bearing, only the face of the note is paid at maturity and the entry is merely a debit to Notes Payable and a credit to Cash. The only record that is made in the notes payable journal when a note is paid is the notation of the date of payment in the Date Paid column.

The accountant must be familiar with the rules for computing interest, and a few of these rules will be given here. Interest is usually computed on the basis of twelve months to the year and thirty days to the month. If a note runs for more than ninety days, interest is computed for the number of months and fraction of a month. For example, a note which runs for six months bears interest for half of the year regardless of the number of days. If the note runs for ninety days or less, interest is computed for the exact number of days. If a note is given February 15 to run for two months, the note would be due on April 15 but interest would be computed for the exact number of days which would be 59 days unless the year was a leap year. In counting the number of days, the day on which the note was given is not counted but the day on which it matures is counted.

The table which follows shows the maturity date and the time for which interest would be charged on notes drawn up in a number of different forms.

Date of Note	Time to Run	Maturity Date	Time for which Interest is Charged
February 5	6 Months	August 5	6 Months
March 1	3 Months	June 1	3 Months
April 5	60 Days	June 4	60 Days
April 5	2 Months	June 5	61 Days
February 1	1 Month	March 1	28 Days

ILLUSTRATION OF THE METHOD OF DETERMINING THE MATURITY DATE AND THE INTEREST PERIOD ON NOTES

The easiest way to compute the interest is first to compute the interest on the basis of six per cent. If the rate is six per cent a year, the interest for sixty days or one-sixth of a year would be one per cent. This amount is easily de-

terminated by pointing off two places in the principal. For example, the interest on \$100 for sixty days at six per cent is \$1, on \$500, \$5. The interest for thirty days is one-half of the interest for sixty days, for fifteen days one-half of thirty days or one-fourth of sixty days, etc. The interest on \$600 for 48 days is computed as follows:

Interest on \$600 for 60 days	\$6.00
Interest for 30 days	3.00
" " 15 "	1.50
" " 3 "	.30
" " 48 "	\$4.80

If the rate of interest is seven per cent, add one-sixth to the interest at six per cent. If the rate is five per cent, deduct one-sixth.

QUESTIONS FOR DISCUSSION

1. Define or explain:
 - a. Notes journals
 - b. Promissory note
 - c. Draft
 - d. Check
 - e. Trade acceptance
2. In the course of entering transactions, you run across several notes. You want to determine whether or not the notes are good. What should you do?
3. What advantages are there in the use of a promissory note?
4. What distinction do you make between an open account and a promissory note? Are they not both promises to pay?
5. Has the trade acceptance any advantages over the promissory note?
6. Distinguish between the notes payable journal and the notes payable register.

PROBLEMS

1. During the month of December the following transactions affected the notes receivable and notes payable accounts of the D. E. Ryan Company:

Dec. 5 Received a note for \$500 from Dalton Company to apply on account. The note was dated on November 5, and is due in 60 days. Interest at 6%.

7 Gave a note to Upson Brothers, due in 60 days, for \$505 in payment of account of \$500 and interest of \$5. The note was noninterest bearing but the interest was included in the face of the note.

8 Received in full of account a note for \$1,000 dated to-day, and due in 60 days from B. O. Buck. Interest at 6%.

9 Borrowed \$3,000 from the Farmers' and Merchants' Bank on a 30 day note dated to-day. Interest at 6%.

10 Accepted a 10 day draft for \$2,000 drawn by C. A. Gibson and Son. The face of the draft was charged to the account of C. A. Gibson and Son.

14 Received in full of account, a note for \$500 dated to-day, and due in 30 days, from B. O. Buck. Interest at 6%.

16 Gave the Delight Washing Machine Company two notes, each for \$1,000, one due in 30 days, and the other in 60 days, with interest at 6%.

22 Received a 60 day note for \$800 from Benson Brothers to apply on account. The note is dated to-day. Interest at 6%.

Required:

(1) Prepare a notes receivable and notes payable journal.

(2) Make the entries and post to ledger accounts.

2. Draw up the notes given by Dalton Company and Benson Brothers referred to in problem 1.

3. Draw up the draft which was accepted for C. A. Gibson as referred to in problem 1.

4. Draw up the note given to the Farmers' and Merchants' Bank as referred to in problem 1.

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5. Indicate the entries made on the books of each of the other parties to the notes and drafts referred to in problem 1. Show in this form:

Date of Note	Books of	Debit	Credit

6. Complete the following table, assuming the rate of interest to be 6%

Number of Note	Date of Note	Face of Note	Time to Run	Maturity Date	Time for which Interest is Charged	Amount of Interest
1	July 30	1,000	6 Months			
2	July 15	3,000	2 Months			
3	July 15	3,000	60 Days			
4	August 10	2,500	45 Days			
5	February 15	6,000	38 Days			
6	March 4	1,500	1 Month			

REFERENCES FOR FURTHER STUDY

NEGOTIABLE INSTRUMENTS: Scovill, *Elementary Accounting*, Part One, pp. 328-354

CONTRACTS: NEGOTIABLE INSTRUMENTS; NOTES RECEIVABLE; NOTES PAYABLE: McCarty and Amidon, *Survey Course in Accounting*, pp. 48-53

THE FINANCIAL STRUCTURE: White, *Business Management, An Introduction to Business*, pp. 259-278

CHAPTER XV

THE GENERAL JOURNAL

PURPOSES OF THIS CHAPTER

1. To illustrate some of the miscellaneous transactions which are recorded in the general journal
2. To show how transactions are entered in the general journal and posted from it

The journals which have been described and illustrated in the three preceding chapters are used to record certain types of transactions which occur frequently in business. There remain a number of miscellaneous transactions which cannot be properly recorded in any of these journals and which do not occur frequently enough to justify the use of special journals. These transactions, which involve debits and credits to a great many accounts, are entered in a book called *the general journal*.

The form of the general journal and the method of making entries in it are illustrated below.

LF	Date		.....	.....
	Account Debited	Account Credited		
	Explanation of the transaction			

It will be observed that the date is written in the middle of the page, and is repeated with each transaction though it

is not necessary to write the month and year with each transaction. The month and year are indicated in the first transaction recorded on the page; and when other transactions are recorded, only the day of the month needs to be given. The first column to the left is used as a folio column. In the next two columns the names of the accounts debited and credited are written, a line being used for each, with the name of the account debited always written first and the name of the account credited indented a little to the right. The amount of the transaction is written after the name of each account, the amount of the debit being written in the first money column and that of the credit in the second money column. This arrangement minimizes the danger of mistakes in posting the entries, since the debit goes to the left side of the account and the credit to the right side. It should be emphasized that in entering the name of the account to be debited or credited, the account name should be written exactly as it is shown in the ledger. If this is not done, the bookkeeper must think of the nature of the transaction and the analysis into debits and credits as he posts, and he is, therefore, unable to concentrate his attention upon the work of posting. The explanation of the transaction is written on the next line below the name of the account credited. Every entry in the general journal must have an explanation. To the student it may seem unnecessary to write out an explanation for some of the transactions, but it must be remembered that the bookkeeper or auditor may wish to check the entries several months after they have been made, and if no explanations are given, it may be difficult to determine whether the transaction has been correctly analyzed and entered. Some of the entries which are made in the general journal will now be illustrated.

The general journal is used to record the original investment of the proprietor or proprietors.—When an individual starts a business, he usually has a number of kinds of assets to invest. He may have a building and a plot of land, store fixtures, cash, and perhaps some merchandise. The entry to record the investment of these assets must be made in the general journal. The cash investment is shown in both the general journal and the cash receipts journal. It must be shown in the general journal in order that the amount of the entire investment may be shown in one place. It must be shown in the cash receipts journal in order that the total cash receipts may be recorded in one book and in order that the cash balance may be known at all times. In order to avoid the posting of the same amount twice, the debit to Cash in the general journal is not posted but checked, while the credit to the capital account of the proprietor in the cash receipts journal is checked. The credit to the capital account is thus posted from the general journal, and the debit to Cash is posted from the cash receipts journal. An opening entry for a single proprietorship is shown in the accompanying illustration.

March 25, 1930			
✓Cash	500.00		
Merchandise Inventory	1,580.00		
Building	3,000.00		
Land	800.00		
E. R. Adams, Capital		5,880.00	
To record the investment of E. R. Adams in the retail grocery business			

If the business is organized as a partnership, the investment of each partner should be recorded by a separate entry. The opening entries for a corporation are also made in the general journal, but discussion of these entries will be

deferred until the corporation is considered more fully than is possible at this time.

Miscellaneous entries are made in the general journal during the accounting period.—One type of entry which is made in the general journal during the accounting period is the correcting entry. To illustrate, assume that George Brown claimed that some merchandise which he bought was unsatisfactory and his claim was allowed. The bookkeeper thought that Brown did not return the merchandise and recorded the transaction as a debit to Sales Allowances and a credit to Accounts Receivable. Some time later, it was learned that the merchandise was returned to stock and that the transaction should have been entered as a sales return. The error may be corrected by an entry in the general journal as follows:

	March 31, 1930		
Sales Returns		24.00	
Sales Allowances,			24.00
To correct error in entering merchandise returned by George Brown on March 10, 1930.			

Another type of transaction which is entered in the general journal is the entry recording the sale of fixed assets. To illustrate, assume that Yates and McClure sell a delivery truck for \$200 which they bought in 1924 for \$875. They carry an Allowance for Depreciation account for this truck, the balance of the account on December 31, 1929, when the truck was sold, being \$550. Both the cost of the truck and the amount of the allowance which has been accumulated for it must be written off as soon as the truck is disposed of. The entry which would be made in the general journal is as follows:

December 31, 1929			
✓	Cash	200.00	
	Allowance for Depreciation on Delivery Equipment	550.00	
	Loss on Sale of Fixed Assets	125.00	
	Delivery Equipment		875.00
	(With appropriate explanation.)		

The debit to Cash in the general journal is checked off and the cash received is entered in the cash receipts journal in a manner similar to the method used in making the opening entry previously explained.

If separate journals are not kept to record transactions affecting the receipt of notes from customers or the giving of notes, as explained in the preceding chapter, many of these transactions must be entered in the general journal. Such transactions would be, for example, the receipt of notes from customers in payment of accounts and the giving of notes to creditors in payment of accounts payable for merchandise purchased.

Adjusting and closing entries are made in the general journal at the close of the accounting period.—One very important use of the general journal is as a book of original entry for the adjusting entries. These entries have not yet been explained but, at this point, it may be said that a number of the asset and liability accounts do not show the true amounts of the assets and liabilities at the close of the accounting period, and these accounts must be debited or credited to show the correct balances. To use a single illustration, certain of the fixed assets have depreciated in value during the period and this decrease in value must be provided for by increasing the amount of the Allowance for Depreciation (often called Reserve for Depreciation). The entry to show this provision is recorded in the general journal. After the adjustments have been made, the

expense and income accounts must be closed in order that the accounts may be used to record the expenses and incomes of the next period. The entries necessary to close the expense and income accounts are also recorded in the general journal.

QUESTIONS FOR DISCUSSION

1. Name the kinds of books of original entry. What information is shown in the general journal?

2. Under what circumstance would it be better to use only one book of original entry, namely, the general journal?

3. What advantages do you see in the use of a general journal? What advantage is there in the use of several books of original entry?

4. Explain the process of posting the general journal. When should this be done?

5. If an accountant uses special journals for purchases, sales, cash, and notes, what entries are left for the general journal?

6. Explain the nature of opening entries. How might the opening entries for a partnership differ from the opening entries for a single proprietorship?

7. Why should errors be corrected by means of journal entries? Why not correct the old entry rather than set up an entirely new offsetting entry?

8. In a retail grocery store, customers are constantly asking how much they owe. What do you suggest in order to have this information available at any time?

9. If a customer is dissatisfied with the statement of his bill, how may its accuracy be checked?

10. Is it better to post all the debits of the day's transactions and then the credits, or would you in turn post the debits and credits of each transaction?

11. What method is used to show the date of the transaction in the general journal?

12. What information should be included in every journal transaction?

PROBLEMS

1. The following are the transactions for A. J. Lynn during the month of December, 1929:

December 1 A. J. Lynn invested \$6,000 in the retail coal business.
Paid rent for month, \$90.

2 Bought merchandise on account from the Eastern Illinois Co., \$500. Purchased furniture and fixtures for cash, \$400.

4 Sold merchandise on account to L. M. Hill, \$60.
Bought merchandise on account from Black Coal Company, \$300.

5 Paid cash for monthly telephone service, \$15.
Bought merchandise on account from Dobbins Coal Company, \$600.

8 Bought merchandise for cash, \$3,000.
Paid Eastern Illinois Coal Co., \$200 on account.

10 Sold merchandise on account to C. D. Smith, \$75.
Cash sales, \$250.

Sold Patton Hotel on account, merchandise, \$375.

12 Paid Eastern Illinois Coal Co., in full of account.
Sold L. M. Hill merchandise on account, \$40.

15 Cash sales, \$300.
Received \$50 on account from C. D. Smith.
Paid clerk's salary for first half of month, \$40.

20 Cash purchases, \$1,000.
Paid Dobbins Coal Company \$200 on account.

22 Received a note from L. M. Hill for \$50 to apply on account.

24 Received from C. D. Smith, balance due.
Sold Patton Hotel merchandise on account, \$100.

25 Bought merchandise on account from Dobbins Coal Company, \$400.
Cash sales, \$250.

27 Sold merchandise on account to A. E. Mills, \$48.
Gave note of \$300 to Dobbins Coal Company to apply on account.

28 Received from Patton Hotel, \$350, to apply on account.

December 28 Sold merchandise to L. M. Hill on account, \$96.

31 Cash sales, \$275.

Clerk hire, \$40.

- (1) Journalize the transactions in the form in which they would be recorded in the general journal Set up the necessary accounts, and post.
- (2) Prepare a balance sheet. The inventory December 31, 1929, was \$4,760.
- (3) Prepare a statement of income and expense.
- (4) Preserve for future use.

2. The following transactions of Orval Loomis should be recorded in the sales, purchase, cash, and general journals respectively:

January 1 Orval Loomis invests \$15,000 in a wholesale business at 516 Pine St. He invests \$5,000 in merchandise, and the remainder in cash.

2 He pays the monthly rent of \$300. Purchases merchandise from W. R. Perry, on account, \$800.

3 Pays \$400 for office furniture.

4 Purchases from J. R. Paisley, on account, merchandise, \$700.

5 Purchases from C. J. Price, on account, merchandise, \$100.

6 Sells to H. D. Hecht, on account, merchandise, \$150.

7 Purchases from W. R. Perry, on account, merchandise, \$500.

8 Pays postage and stationery, \$14.

9 Pays his bookkeeper, Samuel Sims, \$25. This charge is to be to administrative expense. Pays his sales clerk, Harry James, \$20. This charge is to be made to Selling Expense.

10 Purchases merchandise on account from D. R. Hynes, \$260.

Purchases merchandise on account from C. J. Price, \$300.

Purchases merchandise on account from W. S. Becker, \$275.

11 Sells merchandise on account to B. A. Batson, \$300.

Sells merchandise on account to C. T. Button, \$475.

- January 12 Orval Loomis withdraws cash for personal use, \$120.
13 Buys office furniture for cash, \$225.
14 Buys a typewriter for cash at \$90.
15 Pays Samuel Sims \$25. Pays Harry James \$20.
16 Sells merchandise for cash to A. R. Boyd, \$150.
Sells merchandise on account to W. W. Seibert, \$375.
17 Receives from H. D. Herbst, \$150.
Purchases from J. R. Paisley, merchandise, on account, \$1,000.
Purchases from R. D. Hynes, merchandise, on account, \$620.
Purchases from J. C. Shaw, merchandise on account, \$1,200.
18 Sells merchandise for cash to J. F. Porter, \$1,500.
Sells merchandise for cash to F. O. Biehn, \$325.
19 Orval Loomis withdraws merchandise for private use valued at \$30.
20 Pays R. D. Hynes, by check, \$260.
Pays W. S. Becker, by check, \$275.
21 Receives from B. A. Batson \$300 in payment of invoice of January 11.
22 Pays the Baltimore and Ohio Railroad Company \$120 for freight on merchandise.
23 Pays Samuel Sims \$25. Pays Harry James \$20.
Purchases building and land at 516 Pine Street for \$7,000 cash. The building is valued at \$4,000 and the land at \$3,000.
24 Pays J. R. Paisley \$700 in payment of invoice of March 4.
Pays Michigan Central Railroad Company \$50 for freight on merchandise received over that road.
25 Sells J. M. Picton merchandise for cash, \$265.
Sells R. W. Fowler merchandise on account, \$1,200.
26 Sells T. J. Jarman merchandise on account, \$1,600.
27 Orval Loomis gives \$40 of merchandise to Y. M. C. A.
28 Gives a 20-day note to J. R. Paisley in payment of invoice of January 17.
Pays J. C. Shaw, \$1,200 in payment of invoice of Jan. 17.

- January 28 Pays R. D. Hynes, \$620 in payment of invoice of Jan. 17.
- 29 Purchases merchandise, n/15, from C. L. Ames, \$1,500.
Purchases merchandise, n/10, from M. J. Collins \$2,600.
- 30 Pays C. J. Price \$300 in payment of invoice of June 10.
Sells I. H. Blank, merchandise for cash, \$1,350.
Sells O. C. Andrews, n/30, merchandise, \$1,870.
- 31 Receives a 30-day note for \$475, from C. T. Button, in payment of invoice of Jan 11.
Cash sales, \$500.
- 31 Make entry to record depreciation on furniture and fixtures at the rate of 10% a year and on building at the rate of 2% a year.
- (1) Enter each transaction in the proper journal.
- (2) Post all transactions to the ledger accounts.
- (3) Make a balance sheet and a statement of income and expense.
The ending inventory of merchandise is \$5,800.
- (4) Preserve this exercise for future use.

REFERENCES FOR FURTHER STUDY

- THE GENERAL JOURNAL: Kester, *Accounting Theory and Practice*, 3d. ed., Vol. I, pp. 183-197
- BOOKS OF ORIGINAL ENTRY—JOURNAL: Scovill, *Elementary Accounting*, Part One, pp. 171-84

PART IV

HOW THE BALANCE SHEET AND THE STATE- MENT OF INCOME AND EXPENSE ARE PREPARED

CHAPTER XVI

THE TRIAL BALANCE

PURPOSES OF THIS CHAPTER

1. To show how the accuracy of the accounting records is verified by means of the trial balance
 2. To explain what the trial balance does and does not prove
 3. To explain some methods of locating errors
-

We have now completed our study of the way in which accounting records are used to collect and record information during a given fiscal period. We are ready, therefore, to study the procedure by which the balance sheet and the statement of income and expense are prepared from the records. The procedure will be described in detail in the next four chapters but it will be surveyed at this point so that the student may have in mind the general plan as he later studies the details.

The first step in preparing the balance sheet and statement of income and expense is the taking of a trial balance. This is a way of determining whether equal debits and credits have been entered and posted from the journals. It is done by making a list of the balances of all accounts in the ledger. As a second step, allowance must be made for the fact that certain assets, liabilities, expense, and income items in the accounts may need to be adjusted to show the true financial condition of the business. An example is the allowance which must be made for the decline in the value

of buildings, due to depreciation during the year. Such corrections are accomplished by means of changes called adjusting entries. The accounting reports are next prepared from the accounts. Finally, the accounts are prepared for making the entries of the next accounting period.

A device known as the *working sheet* is used to arrange the data pertaining to the trial balance, the adjusting entries, and the closing and postclosing entries, and in preparing the accounting reports. The working sheet, it may be pointed out, is in practice made out before any adjusting or closing entries are recorded in the accounts; and the accounting reports are usually prepared from the working sheet instead of from the accounts. In order to simplify the discussion, however, the trial balance and the adjusting and closing entries will be explained before the working sheet is considered.

The mathematical accuracy of the accounts must be tested at regular intervals.—The procedure for testing the mathematical accuracy of the accounts is treated in this book as a part of the work of preparing the balance sheet and the statement of income and expense, for the reason that entries which have been made in the accounts must be proved to be correct before an attempt is made to prepare the financial statements. It should be kept in mind, however, that the accuracy of the accounts should be tested at various times during the accounting period and not merely at the end of the period. This may be done as often as once a month or as often as the journals are posted in full. If the accuracy is checked each month, it will be found to be much easier to locate any mistakes that may have been made than if the accuracy is checked less frequently. Mistakes should be found and corrected as soon as possible after they have been made, and especially if they are in the accounts

with customers. Suppose, for example, that a sale of \$35 is made and this is recorded as a debit to the customer of \$53. The customer will, of course, report the error and it will be corrected. He will tend to feel, however, that the company is careless in its methods and that he might do better to trade elsewhere. On the other hand, if the debit is correctly recorded as \$35 but the credit to sales is entered as \$53, the statement of income and expense cannot be correctly prepared. Again, if a customer remits \$20 on his account and the debit to Cash is incorrectly entered as \$2 while the credit is correctly entered as \$20, the cash actually on hand will not agree with the amount which the Cash account shows to be on hand. This error could be detected by a count of the cash which would call for a checking of the entries in the cash records, but many errors could not be detected in this way. Erroneous debits to expense accounts, for example, will not be detected unless there is some way of checking the accuracy of the entire ledger.

The correctness of the accounts is checked by the trial balance.—The trial balance is merely a summary of the debits and credits of the accounts. Since in making entries in the ledger the debits and credits of each transaction are equal, it follows that if no mistakes are made, the total debits in the whole ledger will be equal to the total credits. The trial balance checks the accuracy of the work by testing this equality.

There are two methods of preparing a trial balance.—The trial balance may be prepared by either of the following methods:

1. It may be a trial balance of the totals of the debits and the totals of the credits of the accounts. To prepare a trial balance of totals, the bookkeeper adds the debits of each account and writes the total debits of the account in pencil figures under the last entry in the account. He then

does the same for the credits, repeating the operation for each account in the ledger. He then lists the accounts in the order in which they appear in the ledger and places opposite the name of each account the total debits and the total credits of that account, the debits being entered in the left column and the credits in the right column. The total of the debits should be equal to the total of the credits.

2. It may be a trial balance of balances. To prepare a trial balance of balances, the bookkeeper takes the difference between the total debits of each account and the total credits, entering the difference in pencil on the larger side of the account on the last line on which an entry has been made on that side. He then lists the accounts in order but places opposite each account name only one figure which is the balance of the account. The debits are listed in the left column and the credits in the right; and if there has been no mistake in recording the transactions, the total of the debit column will equal the total of the credit column.

The two methods of arranging the trial balance are illustrated on page 229. The first is a trial balance of totals, and the second a trial balance of balances.

There is no great advantage of one method over the other. Some businesses prefer the trial balance of totals because to some extent it indicates the volume of business. At times when it is not feasible to prepare a balance sheet and a statement of income and expense, the trial balance may be used to indicate the trend of the volume of business and of expenses. The trial balance of totals shows this trend better than does the trial balance of balances. The same argument might be advanced for the inclusion of accounts that have equal debits and credits as well as for those that do not. The accounts that balance, however, are usually not included in the trial balance.

THE TRIAL BALANCE

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A. P. WILSON

TRIAL BALANCE JANUARY 31, 1930

Cash	\$3,702	\$2,095
Accounts Receivable	532	152
Notes Receivable	100	
Furniture and Fixtures	25	
Delivery Equipment	50	
Building	100	
Land	500	
Accounts Payable	450	1,150
Notes Payable		150
A. P. Wilson, Capital		3,000
Sales		532
Purchases	1,500	
Buying Expense	10	
Selling Expense	20	
Delivery Expense	15	
Administrative Expense	75	
	<u>\$7,079</u>	<u>\$7,079</u>

A. P. WILSON

TRIAL BALANCE, JANUARY 31, 1930

Cash	\$1,607	
Accounts Receivable	380	
Notes Receivable	100	
Furniture and Fixtures	25	
Delivery Equipment	50	
Building	100	
Land	500	
Accounts Payable		\$700
Notes Payable		150
A. P. Wilson, Capital		3,000
Sales		532
Purchases	1,500	
Buying Expense	10	
Selling Expense	20	
Delivery Expense	15	
Administrative Expense	75	
	<u>\$4,382</u>	<u>\$4,382</u>

The trial balance of totals requires one less step in the preparation, since it is not necessary to subtract the total debits from the total credits of an account, or the reverse, in preparing the trial balance in this form. However, this

step must be performed before the accounting reports are prepared, and it makes little difference whether it is performed before or after the equality of debits and credits is checked. Since the primary purpose of the trial balance is to serve as a checking device and to facilitate the preparation of the accounting reports, the method which best serves this purpose is the one to be recommended. It is somewhat easier to prepare the balance sheet and the statement of income and expense from the trial balance of balances, and for this reason the trial balance of balances is usually preferred.

The trial balance does not prove that no errors have been made in the accounts.—The fact that the two sides of the trial balance show the same totals proves that the debits and credits in the ledger are equal, but it does not prove that no errors have been made in the accounts. The debits and credits might be equal even though any or all of the following errors have been made:

1. Debits or credits may have been placed in the wrong accounts. For example, an expense may have been debited to an asset, as repairs to truck may have been debited to Delivery Equipment instead of to Delivery Expense.

2. Some transactions may have been omitted entirely. If a sales ticket is lost and no entry is made for the sale, the accounts would be in balance, though both Accounts Receivable and Sales would be understated.

3. A transaction may have been entered for a wrong amount. If a sale of \$50 is entered as a debit to Accounts Receivable for \$40 and a credit to Sales for the same amount, the trial balance will show the same totals on each side despite the error. Mistakes of this sort are not likely to be detected unless they are reported by customers or unless all transactions in the ledger are checked.

4. A mistake of corresponding amount may have been made on each side of the ledger. In totaling the entries in the account, for example, an error of \$10 may have been made on the debit side of one account and an error of \$10 may have been made on the opposite side of some other account. These two errors would offset each other with the result that the trial balance would seem to be correct. Errors of this sort for exactly the same amount and on opposite sides of the ledger are, however, not common.

Various plans may be followed in locating errors when the trial balance proves that an error has been made.—While the trial balance does not prove that no error has been made, it is nevertheless the most important single device in checking the correctness of the accounts. If the accounts are not in balance, this is conclusive proof that one or more errors have been made. An error may have been made in adding up the two sides of the trial balance itself, or an item may have been incorrectly transcribed from the ledger to the trial balance, or errors may have been made in the addition of the debits or credits of an account, or errors may have been made in posting, or an item may have been posted to the wrong side of an account, or the debits and credits entered in the journal may not have been equal, or any one or more of a number of other errors may have been made. Obviously, the locating of the error may require a great deal of checking. Before one plunges into the checking, however, he should consider what type of error has probably been made. The following suggestions may be of value:

1. Determine the amount of the error. Knowing the amount of the error may be of great help in locating it. If the difference in the two sides is \$10, \$100, or \$1,000, it is very likely that a mistake in addition has been made. If the mistake is for an odd amount, a transaction for exactly

the amount of the mistake may often be found. If this is the case, the method of entering the transaction should be very carefully checked to determine whether the error did not arise as a result of the handling of it.

2. If the difference suggests an error in addition, the trial balance should be added again, then the ledger accounts should be checked.

3. If the difference between the two sides is divided by two and the quotient is found to be equal to the amount of some transaction, the error may be due to the placing of both debit and credit of that transaction on the same side of the ledger. Look for a transaction of half the amount of the error, and if such a transaction is found, check carefully the method of entering and posting it.

4. If the amount of the error is divisible by 9, the error may be due to transposition or transplacement. Transposition means that two figures of an item have been interchanged, as \$376.48 may have been entered as \$367.48 on one side of the ledger while being entered correctly on the other side. Transplacement means that a decimal point has been misplaced, as \$750.00 may have been entered as \$75.00.

5. Make sure that all ledger accounts have been included in the trial balance.

6. Take off a list of the balances of the accounts of each subsidiary ledger and compare the total of the balances of the subsidiary ledger with the balance of the controlling account in the general ledger. For example, the total amount due from customers as shown by the balances of the accounts with customers in the accounts receivable ledger is compared with the amount due from customers as shown by the Accounts Receivable account in the general ledger. The same thing is done for the accounts payable, notes

payable, notes receivable, and other assets for which subsidiary records are kept. A similar check may be made of cash by comparing the balance of the Cash account with the cash on hand as determined by a count of cash and with the amount on deposit in the bank as shown by the bank statement.

If the error is not detected by any of these methods, a check of the entries, the postings, and the balancing of the accounts may be necessary but this should not be undertaken until attempts have been made in other ways to find the error.

QUESTIONS FOR DISCUSSION

1. What is the purpose of making a trial balance?
2. When should the trial balance be prepared?
3. What are the advantages and disadvantages of the two methods of setting up a trial balance?
4. Can a trial balance be of any value as a report to guide the future activities of a business? If so, how?
5. In what order should the accounts be listed when a trial balance is taken?
6. In making up a trial balance according to the second method explained in this chapter, what preliminary work should be performed?
7. A bookkeeper makes a trial balance for the Anderson Wholesale Company each month, yet customers complain that statements sent them are incorrect. How is this possible in view of the fact that a trial balance has been made?
8. Point out some methods of locating errors in a trial balance.
9. In the trial balance of M. S. Gladish various accounts are listed under Accounts Receivable and Accounts Payable. Would it not be better in a trial balance to use merely the summary accounts, such as Accounts Receivable and Accounts Payable?

PROBLEMS

1. From the information given for R. O. Snell in problem 3 of Chapter IX, prepare a trial balance.

2. The following transactions were performed by M. O. Barnes for the month of December:

December 1 Paid telephone bill for month, \$1.

2 Bought merchandise on account from Andrews and Co., \$375.

3 Sold for cash: 3 shirts at \$3 each; two suits at \$45 each.

4 Bought from W. M. Spencer, on account, merchandise, \$100.

5 Cash sales of 5 suits at \$50 each; 7 shirts at \$4 each; 1 overcoat at \$50.

8 Sold E. R. Talbot, on account, 2 pairs of shoes at \$6 each.

Paid delivery boy, \$3.

10 Received full settlement from E. R. Talbot.

12 Sales on account to Smith Company amounting to \$50.

Paid for heat and light, \$6.

15 Settled account in full with W. M. Spencer. Purchased merchandise, on account, from Andrews and Co., \$35.

Sales, on account, to E. R. Talbot, \$15.

Set up the required accounts, enter the transactions, and make a trial balance.

3. During the month of January, the following transactions were made by Horace Easton who is engaged in a retail grocery business:

January 1 Horace Easton invested \$1,800 in cash and \$2,000 in merchandise, in his business.

Paid \$200 for rent.

Purchased coal for \$70.

2 Purchased merchandise on account from Ned Anderson for \$460.

3 Purchased merchandise for cash, \$305.

January 7 Sold on account to the following customers:

J. B. Bishop	\$48
Leon Hill	69
Jim Dewey	52
Spencer McGowan	108

8 Paid sales clerk for week, \$20

12 Sold on account to:

J. B. Bishop	\$22
Leon Hill	17

13 Received cash from customers to apply on account:

Jim Dewey	\$27
Spencer McGowan	58

14 Purchased on account from Ned Anderson, \$220.

15 Paid sales clerk for week \$20

17 Paid for advertising \$15

Withdrew for personal use, 25

18 Purchased on account from Clayton Bowden, \$350.

20 Paid Clayton Bowden \$15 to apply on account.

22 Paid clerk \$20 for services.

25 Sold to the following customers on account:

J. B. Bishop	\$22
Leon Hill	28
Jim Dewey	8
Spencer McGowan	10

28 Received a 30-day note from J. B. Bishop in full of account.

Gave a 30-day note to Ned Anderson in full of account.

31 Cash sales for other than those mentioned above were \$1,600.

Purchased delivery equipment, \$520.

Purchased furniture and fixtures, \$330.

Paid sales clerk, \$25.

Paid delivery expense, \$3.

Paid telephone and telegraph expense, \$4.

Paid light bill, \$2.

Set up the various accounts required, using detailed classification for expenses. Enter the transactions in the accounts.

4. Make a trial balance from the information supplied in problem 3 for the business of Horace Easton.
5. Prepare a trial balance from the transactions of A. J. Lynn, problem 1, Chapter XV.
6. Prepare a trial balance from the transactions of Orval Loomis, problem 2, Chapter XV.

REFERENCES FOR FURTHER STUDY

- THE TRIAL BALANCE AND METHODS OF LOCATING ERRORS: Kester, *Accounting Theory and Practice*, 3d. ed., Vol. I, pp. 114-121
- THE TRIAL BALANCE: Scovill, *Elementary Accounting*, Part One, pp. 122-138

CHAPTER XVII

HOW ADJUSTMENT IS MADE FOR ACCRUED, DEFERRED AND ESTIMATED ITEMS

PURPOSES OF THIS CHAPTER

1. To explain why the figures in the trial balance do not reflect the true financial condition of the business
 2. To explain the various types of income and expense that must be taken into account before the financial statements can be prepared
 3. To show how adjustment is made for each
-

The trial balance is only the point of departure for the preparation of the balance sheet and the statement of income and expense. The accounting reports cannot be prepared directly from it as it is taken from the accounts, for the trial balance shows merely the amounts of various accounts after the last transaction of the period has been entered in the journals and posted to the accounts. Additional facts relating to the financial condition of the business must be obtained and allowance made for them before the profits of the period or the amounts of the various assets and liabilities can be accurately determined. After the trial balance has been taken at the close of the fiscal period, the next step in preparing the financial reports is to make allowance for accrued, deferred, and estimated items. It is to these items and the method of entering them in the accounts that we turn our attention in the present chapter.¹

¹ The recording of these data is in reality a part of the process of gathering and recording the information for the reports which was the subject of Part

The items for which adjustment must be made at the close of the fiscal period are of five kinds.—These are as follows: (1) Accrued income, which may be illustrated by interest on notes receivable which has accrued but which has not yet been collected, including that which is not yet due. This is regarded as income to the business for the period in which it accrued, even though it is not actually collected until the next period. (2) Accrued expense. This is a cost of running the business which has not been paid but which must be paid later. Salaries earned by sales clerks but not paid are an example. (3) Deferred charges to expense. This is an expense item which has been paid but of which the business has not yet received all the benefit. Prepaid insurance is an example. (4) Deferred credits to income. This item represents payments received from some one else for which the business has not rendered service or goods at the close of the fiscal period. This may be illustrated by rent which a landlord receives from a tenant, the rent being paid in advance. This is income to the landlord only as the tenant uses the building. (5) Estimated items. These are expense items which are certain in nature but indefinite in amount. An example is the decrease in the value of a building due to wear and tear and the action of the weather. Every building depreciates with the passing of the years, but the amount of decrease in any one year cannot be measured with precision; it can only be estimated. These five kinds of items will now be considered in detail.

III. The subject of the present chapter, therefore, might logically have been included in that part of the book; but since allowance for these items is not made until the time of making the reports and since the making of the allowances is an essential step in that process, it has seemed better to defer a consideration of this subject to the present time.

Adjustment is made for accrued income by debiting an asset account and crediting an income account.—This item may be illustrated by accrued interest on notes receivable. For example, a note for \$1,000 is received on December 1, the note to run for 60 days with interest at 6 per cent. At the maturity of the note, the maker will pay to the business \$1,010, the \$10 being interest income to the business. Since the note has already run one half of the time by December 31, it is obvious that the business has earned \$5 interest income though it has not collected it and will not collect it until another thirty days have passed. If the income for the year ending December 31 is to be stated correctly, credit must be taken for \$5 income. The income is represented by a claim against the maker of the note, which is called Accrued Interest Receivable. This item is recorded in the general journal by the following entry:

December 31		
Accrued Interest Receivable	5.00	
Interest Income		5.00
To record interest accrued on notes receivable		

The Interest Income is shown in the statement of the income and expense, while the asset is shown on the balance sheet.

Other accrued income items are also recorded by debits to asset accounts and credits to income accounts, though most mercantile businesses do not have accrued income other than interest income. Some companies have commissions earned but not yet received. Such commissions are recorded by a debit to Commissions Receivable and a credit to Income from Commissions.

Adjustment is made for accrued expense by debiting an expense account and crediting a liability account.—Salaries may be paid once a month; wages to day laborers may be

paid every two weeks. At the close of the fiscal year, say on December 31, it is very likely that some employees have earned wages or salaries for a fraction of a month which have not been paid because it is not the practice of the business to pay wages and salaries up to date on the last day of the month. The wages and salaries earned by the employees are an expense of running the business even though they have not been paid, and the obligation of the business to pay such claims is as much a liability as is any other obligation to pay. Therefore, an entry must be made debiting the appropriate expense account and crediting some accrued liability account, as follows:

December 31		
Sales Salaries	125.00	
Office Salaries	100.00	
Accrued Salaries Payable		225.00
To record salaries of sales and office force accrued at the close of the month		

Thus, the entire expense for sales and office salaries, whether paid in cash or merely accrued at the end of the fiscal year, is debited to the proper expense account, and the total is shown in the statement of the income and expense. The liability account is shown on the balance sheet along with other current liabilities.

Other accrued expenses are entered in the accounts by debits to expense accounts and credits to liability accounts. Taxes accrued at the end of the year but not yet paid, for example, are recorded by a debit to Taxes and a credit to Taxes Accrued. The debit balance of the Taxes account is entered on the statement of income and expense, while the accrued liability is shown on the balance sheet. Likewise, interest which has accrued on notes payable and mortgage notes payable but which has not been paid is recorded by a

debit to Interest Expense and a credit to Accrued Interest Payable.

Adjustment for deferred charges to expense is made by a debit to an expense account and a credit to an asset account.

—The method of making allowance for deferred charges to expense, or as such charges are frequently called *prepaid expenses*, may be illustrated by reference to the prepaid insurance account. On July 1, 1929, William Carnahan paid his fire insurance for three years in advance. The amount of the premium was \$288 for the three years. On December 31, 1929, Carnahan still had his insurance paid for $2\frac{1}{2}$ years in advance. The fire insurance policy was as much an asset to him as cash in the till. He is, therefore, justified in showing the amount of the premium paid in advance as an asset on his balance sheet. On the other hand, the cost of the insurance for the six months which have expired is an expense of the year 1929, and the premium for six months, \$48, should be charged to an expense account. The entries to record the facts are as follows:

July 1, 1929		
Prepaid Insurance	288.00	
Cash		288.00
To record fire insurance on store building paid to-day, policy to expire on July 1, 1932		
December 31, 1929		
Insurance Expense	48.00	
Prepaid Insurance		48.00
To record expiration of six months of fire insurance on building		

At the close of each year, the amount of the prepaid insurance which has expired during the year will be transferred to the Insurance Expense account, and the total insurance expense will be shown on the statement of income and expense. Each year will thus be charged with its fair share of

the expense. The year in which the policy expires will be charged with only six months' premium, that is, for the six months ending July 1.

Another example of a deferred charge is office supplies. Office supplies on hand at the close of the fiscal year are considered a deferred charge to expense because as the supplies are used they will be charged as expenses. Thus, while the supplies differ from prepaid insurance just discussed in that they are something tangible, they are like prepaid insurance in that they represent the proceeds of an expenditure which has been made but not yet charged to expense. When supplies are purchased, they are charged to the Supplies account which is an asset account; and the amount which has been used at the close of the year is charged off as an expense, leaving as the balance of the account the amount remaining as an asset. For example, during the year 1929, William Carnahan purchased office supplies to the amount of \$70. At the close of the year, he took an inventory of the office supplies on hand and found that he had supplies which had cost him \$15. Therefore, he must have used supplies to the amount of \$55.00. He must debit an expense account for the supplies used, the credit being to the asset account. The entries are as follows:

Various dates during the year		
Supplies	70.00	
Accounts Payable		70.00
To record office supplies purchased		
December 31, 1929		
Supplies Used	55.00	
Supplies		55.00
To record supplies used during the year, the amount being determined by a comparison of inventory of supplies with total purchased		

The inventory of Supplies is shown on the balance sheet as an asset while the Supplies Used is shown on the state-

ment of income and expense as an expense. The accounts used to record the facts relative to supplies would appear as shown below.

SUPPLIES

Date of Purchase	70.00	1929 Dec. 31	Supplies Used Inventory	55.00 15.00
	<u>70.00</u>			<u>70.00</u>
1930 Jan. 1 Inventory	15.00			

SUPPLIES USED

1929 Dec. 31	55.00
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It will be observed that the inventory of supplies is brought down to the next period in the Supplies account much as a balance is brought down in the usual manner in asset accounts. As additional supplies are purchased during the next year, they are debited to the Supplies account to be added to the amount on hand at the beginning of the year to determine the total for the year.

Deferred charges may be recorded by debiting an asset account and crediting an expense account.—In the illustration of deferred charges, given in the preceding paragraphs, it has been assumed that as prepaid expenses were paid during the year, they were debited to an asset account. At the close of the year it became necessary to recognize the fact that some of the asset had been used and to transfer to an expense account the part which had been used. This is the method of handling prepaid insurance and supplies, as has been explained. Not all prepaid expenses are handled in this manner, however. Certain of the deferred charges are sometimes debited to an expense account when the expenditure is made, and at the close of the fiscal period it

becomes necessary to make allowance for the fact that a part of the charge must be carried forward as an asset to the next period. The unexpired portion is transferred to an asset account, leaving the expired portion as a balance in the expense account. While this method is the reverse of the method by which prepaid insurance and supplies are handled, it accomplishes exactly the same thing. The method may be illustrated by reference to interest paid in advance.

On November 1, William Carnahan borrowed \$1,000 from the bank, giving his note, payable six months after date. The bank deducted the interest in advance, giving Carnahan a deposit credit at the bank for \$970. Since the face of the note which Carnahan gave was \$1,000, the Notes Payable Account must be credited with \$1,000, thus setting up a liability for that amount. The entry to be made is as follows:¹

November 1, 1929		
Cash	970.00	
Interest Expense	30.00	
Notes Payable		1,000.00
To record loan from the bank, note due six months after date. Bank deducted interest in advance, as the note does not bear interest		

It will be observed that the interest is charged to the regular Interest Expense account. (If the method used in handling prepaid insurance had also been used here, the debit would have been to Prepaid Interest.) On December 31, when the financial statements are prepared, allowance must be made for the fact that the next year will receive the benefit of the loan for two thirds of the time which it runs. The year in which the loan was obtained should be charged

¹ It is not meant that this entry would be made in the general journal. It is shown in general journal form as a convenient method of indicating the debits and credits.

with only one third of the expense and the remaining two-thirds should be carried forward as an asset or deferred charge. This is accomplished by the following entry:

December 31, 1929		
Prepaid Interest	20.00	
Interest Expense		20.00
To record amount of interest on note paid in advance to be carried forward to next year as an asset		

The balance of the Interest Expense account is shown in the statement of income and expense. The accounts affected by these entries then stand as follows:

INTEREST EXPENSE

1929			1929		
Nov. 1	On note to bank	30.00	Dec. 31	Prepaid interest	20.00

PREPAID INTEREST

1929		
Dec. 31	On note to bank	20.00

The distinction between the two methods of handling deferred charges is partly a matter of custom, but it may also be justified by the fact that some prepaid expenses are usually exhausted by the close of the fiscal period while others are not. Interest paid in advance during the first part of the year, for example, is exhausted before the close of the year because notes payable usually run for six months or less. It is, therefore, easier to charge the entire payment as an expense and to make allowance at the close of the year for any unexpired portion. With prepaid insurance, the reverse is true. Fire insurance is commonly paid for from one to five years in advance, and the easiest method to follow in accounting for the expenditure is to charge the entire cost to a prepaid expense account when payment is made and to

make allowance for the expired portion at the close of the year.

In the illustrations given, it has been assumed that there was only one fire insurance policy and only one note on which interest had been paid in advance. If there is more than one insurance policy or more than one note, similar calculations would have to be made for each.

Allowance is made for deferred credits to income by debiting an income account and crediting a liability account.—The method of accounting for deferred credits to income may be illustrated by reference to the handling of rent paid in advance. On November 15, William Carnahan rents the room over his store to a lodge for \$10.00 a month, receiving at that time a check for \$60.00 in payment of six months' rent. On December 31, he has actually earned only one and one half months rent or \$15.00 of the \$60.00 which he has received. The remaining \$45.00 is a deferred credit to income, that is, income which will be earned during some later period. This deferred credit must be shown on the balance sheet, and it is commonly spoken of as a service liability since it represents a liability to render service during future periods rather than a liability to pay cash.

When Carnahan receives the cash for the rent, he makes the following entry:

November 15, 1929		
Cash		
Rent Income	60.00	
To record cash received from lodge for rent of lodge hall for six months at \$10.00 per month		60.00

It will be observed that the income account is credited for the entire amount received even though only a part of the income will actually be earned during the current year. At the end of the year, the amount which has not yet been

earned must be set up as a liability or deferred credit. This is accomplished by the following entry:

December 31, 1929		
Rent Income	45.00	
Rent Received but not Earned		45.00
To set up rent received for lodge hall but not earned during this year		

The balance of the Rent Income account, \$15, is shown on the statement of income and expense, while Rent Received but not Earned is shown on the balance sheet. After the adjustment is made the accounts would appear as follows:

RENT INCOME			
1929		1929	
Dec. 31	Unearned	Nov. 15	Cash received
	45.00		60.00
RENT RECEIVED BUT NOT EARNED			
		1929	
		Dec. 31	Unearned
			45.00

Other deferred credits to income should be handled exactly as illustrated for rent income. A magazine publishing company which receives subscriptions in advance should debit Cash and credit Subscriptions when a subscription is received. At the end of the year, the service liability for the unexpired portion of the subscriptions should be set up by debiting Subscriptions and crediting Unearned Subscriptions. Other examples of deferred credits to income are meal tickets sold by a restaurant and outstanding at the end of the year, street car tickets sold by a street car company but not redeemed at the close of the year, and interest received in advance but not yet earned.

Estimated items are allowed for by debits to expense accounts and credits to reserve accounts.—Two examples of estimated items which must be taken account of at the close of the fiscal year are (1) depreciation or decrease in the

value of fixed assets, and (2) the probable loss on bad debts. Reference has been made in an earlier chapter to the method of evaluating the fixed assets and the accounts receivable. The entries made at the close of the year in connection with these assets and the related expense accounts must now be explained more in detail.

The decrease in the value of such fixed assets as buildings, delivery equipment, and furniture and fixtures, is an expense of conducting the business as much as salaries or rent or any other expense. A building which costs \$20,000 and which will be worthless at the end of fifty years will cost the business \$20,000 in depreciation during that time.

In accounting for depreciation, accountants have one of their most difficult problems, for it is not easy to determine in advance how long any asset will last. The most that can be done is to make a reasonable estimate, and for this reason depreciation is classed as an estimated item.

If the decrease in the value of the asset each year could be determined exactly, it would be proper to write down the value of the asset on the books at the close of each year by debiting an expense account for the amount of the decrease and crediting the asset account. This is not advisable, however, because the amount is not certain. The difficulty is overcome by making the credit in an account called Allowance for Depreciation or Reserve for Depreciation and showing on the balance sheet the original cost of the asset less the amount of the reserve.

In making the estimate of the annual decrease in the value of an asset, it is often necessary to take into consideration the fact that the asset may be worth something for scrap at the end of its useful life. An automobile when ready to be scrapped will have some valuable parts which may be removed and sold. A discarded machine may be sold for

scrap iron. Parts of a building may be salvaged when the building is torn down. Often, however, the cost of scrapping an asset such as a building is almost as great as the value of the salvaged parts, and the scrap value of the asset may be safely ignored in such cases.

We turn now to an explanation of the way in which the Reserve for Depreciation account is affected by the recording of the depreciation of the asset year after year, and also of the manner in which the reserve is finally disposed of when the asset is sold or scrapped. A complete explanation of the handling of the depreciation accounts will involve some discussion of the closing entries which are to be illustrated in the next chapter. It seems desirable, however, at this time to illustrate all the entries necessary to record the depreciation of an asset.

To take a concrete case, in 1924 a business purchased an automobile truck for \$1200. It was estimated that this truck would last six years, at the end of which time it could be scrapped or sold for \$120. The cost to the business for the use of the truck is therefore not the entire cost of the truck, but the cost less the amount which will be realized from the machine when it is scrapped. This means that operating expenses over the life of the truck must be charged with \$1200 minus \$120, or \$1,080. If this cost is spread equally over the life of the asset, the amount to be charged each year would be \$1,080 divided by six, or \$180. Since the truck was purchased early in 1924, the first year was charged with a full year's proportion of the cost. The entry made at the end of the year 1924 was as follows:

December 31, 1924		
Depreciation on Delivery Equipment	180.00	
Reserve for Depreciation on Delivery Equipment		180.00
To record the depreciation on truck for the year		

The charge for depreciation on truck, as well as for depreciation on other fixed assets, was shown in the statement of income and expense and therefore was closed into the Expense and Income account. The entry was:

December 31, 1924		
Expense and Income	180.00	
Depreciation on Delivery Equipment		180.00
To close depreciation account into Expense and Income		

The account for Reserve for Depreciation on Delivery Equipment is left open as long as the business owns the truck. At the close of each year, the depreciation on the truck was recorded by exactly the same entry which had been made at the end of the year 1924, and the depreciation account was also closed into Expense and Income at the end of each year. After six years, the two accounts appeared as follows:

DEPRECIATION ON DELIVERY EQUIPMENT

1924		1924	
Dec. 31	Annual depreciation 180.00	Dec. 31	Expense and Income 180.00
	<u>180.00</u>		<u>180.00</u>
1925		1925	
Dec. 31	Annual depreciation 180.00	Dec. 31	Expense and Income 180.00
	<u>180.00</u>		<u>180.00</u>
1926		1926	
Dec. 31	Annual depreciation 180.00	Dec. 31	Expense and Income 180.00
	<u>180.00</u>		<u>180.00</u>
1927		1927	
Dec. 31	Annual depreciation 180.00	Dec. 31	Expense and Income 180.00
	<u>180.00</u>		<u>180.00</u>
1928		1928	
Dec. 31	Annual depreciation 180.00	Dec. 31	Expense and Income 180.00
	<u>180.00</u>		<u>180.00</u>
1929		1929	
Dec. 31	Annual depreciation 180.00	Dec. 31	Expense and Income 180.00
	<u>180.00</u>		<u>180.00</u>

RESERVE FOR DEPRECIATION ON DELIVERY EQUIPMENT

	1924	
	Dec. 31	Annual depreciation 180.00
		<u>180.00</u>
	1925	
	Dec. 31	Annual depreciation 180.00
		<u>180.00</u>
	1926	
	Dec. 31	Annual depreciation 180.00
		<u>180.00</u>
	1927	
	Dec. 31	Annual depreciation 180.00
		<u>180.00</u>
	1928	
	Dec. 31	Annual depreciation 180.00
		<u>180.00</u>
	1929	
	Dec. 31	Annual depreciation 180.00
		<u>180.00</u>

The total credit to the Reserve for Depreciation on Delivery Equipment at the close of the year 1929 was \$1,080. The truck was then sold, the amount realized being \$150.00. This was not the amount which the business had expected to realize, but before we note the entries which actually were made, let us see what entries would have been necessary had the truck realized only \$120. Since the asset had been disposed of, it was necessary to credit the truck account for its original cost, as no entries had been made in the truck account since the date of purchase. The Reserve for Depreciation on Delivery Equipment also had to be written off by a debit to the amount of \$1,080 which was the total of credits in that account. The entry would have been as follows:

December 31, 1929		
Cash	120.00	
Reserve for Depreciation on Delivery Equipment	1,080.00	
Delivery Equipment		1,200.00
To record sale of truck for 120.00		

Since the truck was sold for \$150, there was a gain of \$30 above the amount expected. The entry actually made was as follows:

December 31, 1929		
Cash	150.00	
Reserve for Depreciation on Delivery Equipment	1,800.00	
Delivery Equipment		1,200.00
Gain on Sale of Fixed Assets		30.00
To record sale of truck for \$150, the gain on sale being \$30.00		

Had the truck been sold or scrapped for only \$100.00, there would have been a loss of \$20.00. The entry in that case would have been:

December 31, 1929		
Cash	100.00	
Reserve for Depreciation on Delivery Equipment	1,080.00	
Loss on Sale of Fixed Assets	20.00	
Delivery Equipment		1,200.00
To record sale of truck for \$100.00 at a loss of \$20.00		

The Gain or Loss on Sale of Fixed Assets represents a change in the capital account and should be closed into that account at the close of the year. It should be noted that if an asset is sold during the year, the expense of the year is first charged with depreciation for the fraction of the year which has elapsed, and the gain or loss is then computed by comparing the total credits in the Reserve for Depreciation account and the cash or other value received for the asset, with the original cost of the asset. Suppose, for example that the truck referred to in the illustration just given had been sold on June 30, 1929 for \$200.00. The first journal entry would have been a debit to Depreciation and a credit to the Reserve for the depreciation for one half of the year, or \$90. This would have built up a total credit in the

Reserve account of \$990, and the loss on the sale would have been \$10.00 This entry would then have been made:

June 30, 1929		
Cash	200.00	
Reserve for Depreciation on Delivery Equipment	990.00	
Loss on Sale of Fixed Assets	10.00	
Delivery Equipment		1,200.00
To record sale of truck for 200.00		

The adjustment to be made for loss on bad debts, like the adjustment for depreciation, is made necessary by the fact that a reduction in the value of an asset has taken place. Even though all of the accounts receivable appear to be good, allowance must be made for the probability that some of them will not be collected in full. The adjustment for probable losses on doubtful accounts is usually stated as a percentage of the sales for the year. At the end of the year 1929, a certain firm had on its books accounts receivable of \$3,000. The sales for the year 1929 were \$12,000, and the probable losses were estimated at one per cent of the sales, or \$120. It was not known which of the accounts might prove to be uncollectible, but it was considered improper to list as assets the entire face of the receivables. The estimated losses were recorded by the following entry:

December 31, 1929		
Losses on Bad Debts	120.00	
Reserve for Doubtful Accounts		120.00
To record probable losses on doubtful accounts estimated at 1% of sales		

The loss on Bad Debts was shown on the statement of income and expense, while the allowance was shown on the balance sheet as a deduction from the accounts receivable. In 1930 or in some cases even later, when it was determined which of the accounts were uncollectible in whole or in part,

the loss was charged to the account for Reserve for Doubtful Accounts by an entry such as the one shown below:

June 15, 1930		
Reserve for Doubtful Accounts	18.00	
Accounts Receivable — Frank Smith		18.00
To charge off account of Frank Smith as uncollectible, as Smith has moved to California and refuses to pay balance due		

By the use of this method, the estimated losses on bad debts are charged as an expense in the year in which the sale is made, thus reducing the income of that year. This is the most accurate way of handling such losses.

After all necessary adjustments have been made, the accounts should show the true condition of the business at the close of the fiscal period. All assets owned by the business should be shown at their true balances except that the merchandise inventory account still shows the amount of the inventory at the beginning of the period. All liabilities owed should be correctly stated, and the expense and income items should show the correct totals for the expenses and the income of the period. The accounting reports may, therefore, be prepared from these account balances, as adjusted.

QUESTIONS FOR DISCUSSION

1. What kinds of adjustments would be made by a bank? A manufacturing company? A publishing company? A retail store?
2. The Retail Company holds the note of a customer which was given two months before the date of closing the books and on which interest has accrued. What is the nature of the adjusting entry?
3. The Columbia Manufacturing Company, which closes its books annually on December 31, paid \$300 for a fire insurance policy on July 1. The policy was to run for five years. What entry should be made on July 1? On December 31? On December 31 of the following year?

4. The president of the City Wholesale Company argues that it is not necessary for him to make any allowance for losses on bad debts because all of his accounts are good. Would you agree?

5. The City Wholesale Company owns its building and a plot of land in a large city. The land has increased in value since it was purchased, and the president says that the company does not need to set up an allowance for depreciation because the increase in the value of the land has more than offset the decrease in the value of the building. What would you reply to him?

6. The American Manufacturing Company owes two weeks wages to its employees at the date of the balance sheet, the amount being \$2,000. The bookkeeper fails to take this fact into account in preparing the balance sheet. What is the effect upon the financial statements?

7. Why do you suppose business men are more desirous of considering deferred, accrued, and estimated items now than heretofore?

8. The Noyes Company receives a 60-day, 6% note for \$60 from a customer on April 1. What are the entries on: April 1, April 30 and May 31?

9. The Evans Company issued a \$1,000, 6% note on July 1, the note to run 90 days. Show the entries necessary to record the information up to the time the note is paid.

10. The weekly salaries of the Talbot Company are \$6,000. The month ends on Thursday and the books are closed on that day. Wages are paid on Saturday. How should this information be recorded?

11. On January 1, 1930, the Howell Company receives an annual rental of \$18,000. What entries would be necessary if the books were closed on January 31? What entries if the books were not closed until the end of the year?

12. How does an accountant determine whether there are any accrued and deferred items to be considered? Where does he get his information?

13. A publishing company receives a five year subscription to a magazine on March 15, for \$15.00, sending the first number of the magazine in April. What entry should it make on March 15? On December 31?

14. The Owl Restaurant sells for \$2.00 tickets which entitle the holder to \$2.50 in meals. Outline a system of accounting which will correctly show the income from meals.

15. Explain the accounting principles involved in making allowance for probable losses on doubtful accounts.

16. Show the relation of prepaid expense to unearned income.

PROBLEMS

1. When the books are closed on December 31, 1929, it is found that \$400 taxes must be paid for the past year, but they are not due until January 31, 1930. Make the proper entries for December 31, 1929 with explanations.

2. J. B. Mills rents a store to A. F. Sells for a monthly rental of \$400. On November 30, 1929, two months' rent is due. Make the journal entry to adjust the books on November 30.

3. On July 1, the R. A. Mills Company pays \$2,400 for insurance for the year. Make adjusting entries necessary for each of the six months. Post the above entries and show the condition of the accounts on December 31.

4. The Vogue Publishing Company receives \$48,000 for yearly subscriptions during the month of January. When the books are closed on January 31, what entries are necessary?

5. The following accounts are taken from the yearly trial balance of C. E. Anderson on December 31, 1929:

Inventory, January 1, \$11,000; Store Equipment, \$700; Allowance for Depreciation on Store Equipment, \$70; Delivery Equipment, \$900; Allowance for Depreciation on Delivery Equipment, \$90; Sales, \$24,000; and Inventory, December 31, \$1,300.

Adjust the inventory account. Make entries showing depreciation of 10% on store equipment; 10% on delivery equipment. Make an Allowance of 2% on sales.

6. C. E. Anderson's accounts show the following:

The Heat and Light account shows a debit balance of \$60, \$20 of which has been used. Insurance prepaid has a debit balance of \$120. Insurance has expired to the amount of \$20. Accrued salaries are \$180. Interest on notes payable, \$36. Interest on notes receivable, \$24.

Make the necessary adjusting entries. Set up the accounts and post.

7. On October 1, W. A. Bates obtained a loan of \$970 from his bank, giving a noninterest bearing note for \$1,000 due six months after date. What entry should he make on October 31? On December 31? If the note had been a 6% note for \$970, what would have been the entry at October 1? At December 31?

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8. The following is the trial balance of M. A. Sells on December 31, 1929:

Cash	\$ 6,000	
Accounts Receivable	16,000	
Notes Receivable	5,000	
Merchandise Inventory, Jan. 1, 1929	12,000	
Insurance Prepaid	200	
Furniture and Fixtures	800	
Allowance for Depreciation on Furniture and Fixtures		\$80
Delivery Equipment	1,400	
Allowance for Depreciation on Delivery Equipment		280
Accounts Payable		9,000
Notes Payable		10,000
Purchases	20,000	
Purchase Returns and Allowances		700
Freight and Cartage In	300	
Sales		24,000
Sales Returns and Allowances	500	
Sales Salary	1,600	
Advertising	400	
Delivery Expense	200	
Rent	500	
Heat and Light	100	
M. A. Sells, Capital		21,240
M. A. Sells, Personal	300	
	<u>\$65,300</u>	<u>\$65,300</u>

Facts pertaining to the business but not yet entered in the accounts:

Merchandise Inventory, December 31, 1929, \$10,000

Depreciation:

5% on Furniture and Fixtures

10% on Delivery Equipment

For Bad Debts, 2% of sales

Accrued Income: Interest on Notes Receivable, \$20

Accrued Expense:

Interest on Notes Payable, \$36

Accrued Salaries, \$100

Deferred Charges:

Insurance expired, \$40

Make the necessary adjusting entries in journal form. Prepare a balance sheet and a statement of income and expense.

9. Write out in the form of journal entries the adjustments necessary to record the following. These adjustments are illustrative only and do not all apply to any one set of books.

- (1) An insurance policy costing \$150 was taken out on September 1. Policy runs for one year. Make adjustment necessary on December 31.
- (2) Rent was received in advance for two months on December 1, \$90. Entire amount was credited to Rent Income. Make necessary adjustment December 31.
- (3) Tenant who paid the rent debited Prepaid Rent on December 1. Make adjustment on his books December 31.
- (4) Loan was obtained from the bank on November 1. Face of note given to the bank was \$1,000; but since the note was non-interest bearing, the bank deducted 6% interest for six months which was the time the note was to run. The entire interest charge was debited to Interest Expense on November 1. Give necessary adjustment for December 31.
- (5) When the bank recorded the above loan, it debited Loans and Discounts for the face of the note, crediting the interest to Interest Income. Give adjustment on Bank's books as of December 31.
- (6) Interest accrued on notes receivable of customers on December 31, \$18.00.
- (7) Interest accrued on notes payable at end of month, \$34.00.
- (8) Interest accrued on mortgage payable, \$65.00.
- (9) Salaries due sales clerks at the end of the month, \$15.00.
- (10) Salary due bookkeeper at end of the month, \$12.00.
- (11) Supply of stationery and postage on hand at the end of the month \$8.00. These items were debited to Stationery and Postage when purchased.
- (12) Estimated loss on bad debts, \$180.00.
- (13) Estimated depreciation: on building, \$100.00; on office furniture, \$10.00; on delivery equipment, \$75.00.
- (14) Property taxes due \$150.00. No entry has been made for taxes at any time during the year.

REFERENCES FOR FURTHER STUDY

ADJUSTING THE BOOKS: Kester, *Accounting Theory and Practice*, 3d. ed., Vol. I, pp. 264-74

DEFERRED, ACCRUED, AND ESTIMATED ITEMS: Scovill, *Elementary Accounting*, Part One, pp. 382-407

PREPARATION OF DATA FOR THE STATEMENTS: Folts and Stillman, *Interpretive Accounting*, pp. 156-171

CHAPTER XVIII

HOW THE CLOSING AND POSTCLOSING ENTRIES ARE MADE

PURPOSES OF THIS CHAPTER

1. To explain how income and expense accounts are closed at the end of the accounting period
 2. To show how the accounts are re-opened at the beginning of the next period
-

After allowance has been made in the accounts for the accrued, deferred, and estimated items, and the accounting reports have been made out, the accounts should be prepared for the entry of the transactions of the next accounting period. This means that certain mechanical arrangements or rulings should be made in the accounts in order that the entries made in one accounting period may be easily distinguished from those made in the next period. Unless this is done, the accounting reports of the next period cannot be prepared without difficulty. Five steps are required to complete the closing of the books. These are as follows:

(1) The old inventory which is still carried in the Merchandise Inventory account must be closed out and the ending inventory must be set up.

(2) The expense and income accounts must be closed out and ruled off.

(3) The balance sheet accounts must be ruled off and the balance remaining at the beginning of the next period must be indicated by carrying forward the balance of each account.

(4) Certain postclosing entries must be made.

(5) A postclosing trial balance must be taken. Each of these steps will now be explained.

The beginning inventory is closed out by a debit to Purchases and a credit to Inventory.—By means of this entry the amount of the inventory is entered on the side of the Purchases account on which the purchases for the period were recorded, so that the inventory can be added to the purchases to show the total cost of goods on hand during the period. This entry also closes the Merchandise Inventory account, for the entry on the debit side of the account is now offset by a credit of exactly the same amount. Thus, the old inventory which has been disposed of during the period, is cleared from the accounts. The entry and the accounts involved are as follows:

December 31, 1929			
Purchases		3,000.00	
Merchandise Inventory			3,000.00
To transfer beginning inventory to purchases account			

After the entry has been posted the two accounts appear as follows:

MERCHANDISE INVENTORY

1929			1929		
Jan. 1	Beginning inv.	<u>3,000.00</u>	Dec. 31	To Purchases	<u>3,000.00</u>

PURCHASES

1929					
Dec. 31	Balance	20,000.00			
31	Inventory	<u>3,000.00</u>			

The ending inventory is recorded by a debit to Merchandise Inventory and a credit to Purchases.—The inventory of merchandise on hand at the end of the year, that is, at the

date when the balance sheet is prepared, is an asset, and must be recorded as a debit in the Merchandise Inventory account. The entry is:

December 31, 1929		
Merchandise Inventory	4,000.00	
Purchases		4,000.00
To set up the value of the merchandise inventory on hand at the end of the year		

The balance of the Merchandise Inventory account now represents the goods on hand at the end of the period, while the balance of the Purchases account represents the cost of goods sold. The accounts appear as follows:

MERCHANDISE INVENTORY

1929			1929		
Jan. 1	Beginning Inv.	<u>3,000.00</u>	Dec. 31	To Purchases	<u>3,000.00</u>
1929					
Dec. 31	Inventory	4,000.00			

PURCHASES

1929			1929		
Dec. 31	Balance	20,000.00	Dec. 31	Ending Inventory	4,000.00
31	Inventory	3,000.00			

All detailed income and expense accounts are next closed into a summary account called *Expense and Income*. The Expense and Income account ¹ is opened at the end of each accounting period for the purpose of balancing the expense of the period against the income of the period. All income items are credited to this account, the offsetting debits being in the various income accounts. All expense items, including cost of goods sold, are debited to this account as each expense account is credited with the net expense shown

¹ This account is frequently called the *Profit and Loss account*, but the title used here seems to the authors to be more appropriate.

for the period. The credit for the cost of goods sold is in the Purchases account. By this process, the income and expense accounts are closed; and the Expense and Income account, by offsetting expenses against income, shows the net income for the period. The balance of this account must agree with the net income as shown on the statement of income and expense. As each expense account is credited and each income account is debited, the totals of each side of the account are brought down and double lines are drawn under these totals. The double lines mean that the debits in the account are equal to the credits and that the bookkeeper may hereafter disregard any entries made above the double lines. When the entries of the next accounting period are made in the accounts, they will be written below these double lines and it will be very easy to distinguish between the entries of the different periods.

It should be clearly understood that it is only the accounts used to record expense and income that are closed; the balance sheet accounts are not closed. A moment's reflection will show why this is true. It is necessary to close the expense and income accounts because the totals of the various expenses and incomes, as shown by the expense and income accounts, are shown on the statement of income and expense at the close of each period; and it would not be possible to obtain these totals if the accounts were not clear of all items at the beginning of the period. The assets as shown on the balance sheet, on the other hand, are the amounts which the business has at the close of the period. The amount of any asset, such as cash, is determined by adding the cash received during the period to the balance on hand at the beginning of the period, and subtracting the amount disbursed. The balance of any asset which the business owned at the beginning of the period must, there-

fore, be left on the debit side of the account. The same is true of the liabilities; the liability accounts are not closed, but the amount owed is left on the credit side of the particular liability account.

The balance of the Purchases account is closed into the Expense and Income account by a debit to Expense and Income and a credit to Purchases.—The credit to the Purchases account balances that account and clears it so that the purchases of the next period may be entered.

The balance of the Purchases account is transferred to the Expense and Income account because the balance of the Purchases account represents the cost of goods sold, and the cost of goods sold is one item to be offset against income in determining net income. The Purchases account is therefore closed by the following entry:

December 31, 1929		
Expense and Income	19,000.00	
Purchases		19,000.00
To close Purchases into Expense and Income		

After this entry is posted, the Purchases account is closed and the purchases of the next period may be entered in this account without any possibility of confusion. The Purchases account would appear as shown below:

PURCHASES

1929			1929		
Dec. 31	Balance	20,000.00	Dec. 31	Ending Inventory	4,000.00
31	Beginning Inv.	3,000.00	31	Expense and Inc.	19,000.00
		<u>23,000.00</u>			<u>23,000.00</u>

Sales Returns and Sales Allowances are closed into the Sales account and the balance of the Sales account is then closed into Expense and Income.—On the statement of Income and Expense, the sales returns and the sales allow-

ances are deducted from the gross sales to determine the net sales. It is therefore proper to make a similar deduction in the accounts. This is accomplished by transferring the balances of the accounts showing these items to the sales account. The entries are illustrated below:

December 31, 1929			
Sales		150.00	
Sales Returns			150.00
To close Sales Returns into Sales			

December 31, 1929			
Sales		200.00	
Sales Allowances			200.00
To close Sales Allowances into Sales			

The balance of the Sales account, which represents net sales, is then closed into the Expense and Income account by this entry:

December 31, 1929			
Sales		22,650.00	
Expense and Income			22,650.00
To close the Sales account into Expense and Income			

The accounts affected by these entries are shown below:

SALES RETURNS

1929		1929	
Dec. 31 Balance	150.00	Dec. 31 To Sales	150.00

SALES ALLOWANCES

1929		1929	
Dec. 31 Balance	200.00	Dec. 31 To Sales	200.00

SALES

1929		1929	
Dec. 31 Sales Returns	150.00	Dec. 31 Total for period	23,000.00
31 Sales Allowances	200.00		
31 Expense and Inc.	22,650.00		
	23,000.00		23,000.00

The remaining expense and income accounts are now closed into Expense and Income.—The expense accounts are closed into Expense and Income by debiting Expense and Income and crediting each of the various expense accounts. The income accounts are closed by debiting the income accounts and crediting Expense and Income. The items which would appear in the Expense and Income account are shown in tabular form below.

EXPENSE AND INCOME

Cost of Goods Sold	Net Sales
Sales Salaries	Purchase Discount
Sales Commissions	Interest Income
Freight Out	
Salaries of Truck Drivers	
Office Salaries	
Stationery and Postage	
Telephone and Telegraph	
Rent	
Heat and Light	
Insurance Expense	
Taxes	
Miscellaneous Office Expense	
Sales Discount	
Interest Expense	
Balance to Capital	

The Expense and Income account is closed into the capital account.—The balance of the Expense and Income account is the net income or the net loss for the period. If the income of the business exceeds the cost of getting the income, the right side or credit side of the Expense and Income account will total more than the debit side. The difference between these totals or the balance of the account would represent the net income. If the income is less than the cost of getting it, the debit side will be larger than the credit side and the difference will be the loss for the period. If the business has had a net income, the Expense and Income account is closed by a debit to Expense and Income and a credit to the capital account. If the business has had a loss,

the Expense and Income account is closed by a credit to Expense and Income and a debit to the Capital account.

The balance sheet accounts are ruled and balanced.—The third step of the work of preparing the accounts for the entries of the next accounting period is to rule off the balance sheet accounts and carry forward to the next period any balances remaining at the close of the current period. Most of the balance sheet accounts have received a number of debits and credits during the current period, and the work of balancing the account involves the writing, on the smaller side of the account, of an amount sufficient to balance that account, bringing down the totals of each side which, of course, will be equal to each other, drawing double lines under these totals, and finally, writing on the next vacant line of the account the balance carried forward to the next period. If the debits to the account are larger, the balance is brought down on the debit side. If the credits are larger, the balance is brought down on the credit side. Of course asset accounts will show debit balances while liability and proprietorship accounts will show credit balances. For illustrations of the method of ruling and balancing the accounts, the student is referred to the set of accounts at the close of this chapter.

Certain entries called postclosing entries must be made after the books have been closed.—These are also called reversing entries because they are the reverse of some of the adjusting entries, and they are also called readjusting entries for the same reason. Not all of the adjusting entries need to be reversed, and the nature of the postclosing entries must be carefully studied to see which ones are to be reversed in any particular set of accounts.

The purpose of the postclosing entries is to permit the entries to be made in the accounts during the next period in

the same manner they were made during the past period. Unless some of the adjusting entries are reversed, this cannot be done. For example, all cash paid to employees on account of salaries during the past period were charged to the appropriate salary account, say to Sales Salaries. However, if accrued salaries of one half week were entered at the close of the fiscal period, the payment of the weekly salaries for the first week in January cannot be charged to Sales Salaries until the adjusting entry has been reversed. One half of the payment would have to be entered as a debit to Accrued Salaries and one half to Sales Salaries. But if the adjusting entry has been reversed with Accrued Salaries debited and Sales Salaries credited, the Sales Salaries will show a credit of one half of the salaries for the week, and the entire payment can then be debited to Sales Salaries because the debit is partly offset by the credit. The effect on the accounts is shown below:

SALES SALARIES

1929		1929	
Various dates	1,560.00	Dec. 31 Expense and In-	
Dec. 31 Accrued	15.00	come	1,575.00
	<u>1,575.00</u>		<u>1,575.00</u>
1930		1930	
Jan. 4	30.00	Jan. 1 Accrued	15.00

ACCRUED SALARIES

1930		1929	
Jan. 1 To Sales Salaries	15.00	Dec. 31 Accrued Sales Salaries	15.00

These accounts show that on December 31, sales salaries were accrued to the amount of \$15. These were recorded as a debit to Sales Salaries and a credit to Accrued Salaries. The Sales Salaries account was then closed into Expense and Income. Next, the postclosing entry was made debiting

Accrued Salaries and crediting Sales Salaries, the Sales Salaries account thus showing a credit balance. When salaries were paid on January 4, the entire week's salary was charged to Sales Salaries. Other accrued expenses are handled in the same way except Accrued Taxes. This account does not need to be adjusted by a postclosing entry because the taxes for one fiscal period are all paid in a succeeding period, so the entire payment can be debited to the Accrued Taxes account when the taxes are paid.

Another account which needs to be readjusted by a postclosing entry is the Accrued Interest Receivable account. In the adjusting entry, it will be recalled, accrued interest on notes receivable is set up as an asset by a debit to Accrued Interest Receivable and a credit to Interest Income. Now when the interest is collected on the note, it is more convenient to credit the entire amount of interest to Interest Income without dividing the payment between the amount which was accrued at the end of the preceding year and the amount which has been earned since that time. If this division had to be made on all of the interest collected, it would involve a great deal of additional labor.

The adjusting entry to record deferred charges or prepaid expense is reversed if the expense is charged to an expense account at the time it is incurred. This is true, for example, of interest expense. The deferred charge for interest paid in advance is recorded by debiting Prepaid Interest and crediting Interest Expense. The interest paid in advance will be an expense of the next accounting period, and the amount set up as a deferred charge is, therefore, transferred back to the Interest Expense account after the books are closed by a debit to Interest Expense and a credit to Prepaid Interest. If the prepaid expense is entered at the time of the payment of the expense by a debit to a prepaid expense

account, then the adjusting entry need not be reversed. This is true, for example, of prepaid insurance and supplies, and no reversing or postclosing entry is needed for these items.

The entry to set up the deferred credit to income is reversed by a postclosing entry. Interest received but not earned, for example, is set up at the end of the accounting period by a debit to Interest Income and a credit to Interest Received but Not Earned. After the Interest Income account has been closed into Expense and Income, the balance of the Interest Received but Not Earned account is transferred back to the Interest Income account by a debit to the former and a credit to the latter. The interest will usually be earned during the next period; if it is not thus earned, adjustment can be made by setting up the unearned portion at the end of the next period.

A postclosing trial balance is taken after the postclosing entries have been entered and posted.—Between the taking of the before-closing trial balance and the completion of the postclosing entries, a great many entries have been made in the accounting records. Unless the bookkeeper has been very careful, he may have made a mistake in some of the work of adjusting and closing and reopening the books. To make sure that the books are still in balance, he takes a postclosing trial balance as soon as the work of making the postclosing entries is completed. If this trial balance checks, the accounts are ready to receive the entries of the next accounting period.

The entire process of adjusting and closing the accounts is illustrated in the remaining pages of this chapter.—The various parts of the process of adjusting and closing the accounts have been explained in the preceding chapters, but to show the complete process followed in a single business,

the adjusting, closing, and postclosing entries made by Yates and McClure at the end of the year 1929 will be illustrated. The trial balance of the partnership taken at the close of business on December 31 is as follows:

YATES AND MCCLURE

TRIAL BALANCE, DECEMBER 31, 1929

Cash	\$350.00	
Notes Receivable	100.00	
Accounts Receivable	2,200.00	
Reserve for Doubtful Accounts		\$140.00
Inventory, January 1	4,000.00	
Prepaid Insurance	120.00	
Office Supplies	80.00	
Delivery Equipment	500.00	
Reserve for Depreciation on Delivery Equipment		80.00
Furniture and Fixtures	200.00	
Reserve for Depreciation on Furniture and Fixtures		40.00
Building	3,000.00	
Reserve for Depreciation on Building		800.00
Land	500.00	
Accounts Payable		350.00
Notes Payable		2,000.00
J. W. Yates, Capital		2,400.00
H. H. McClure, Capital		2,400.00
Sales		14,000.00
Sales Returns	35.00	
Purchases	9,000.00	
Sales Salaries	1,150.00	
Delivery Expense	900.00	
Heat and Light	130.00	
Telephone and Telegraph	40.00	
Interest Expense	30.00	
Purchases Discount		125.00
	\$22,335.00	\$22,335.00
	\$22,335.00	\$22,335.00

The following additional information relative to the financial condition of Yates and McClure on December 31 is available:

(1) The inventory of merchandise on hand at the close of the year is found to be \$4,500.00.

(2) It is estimated that the loss on bad debts will equal 1% of the sales.

(3) The debit to prepaid insurance represents the cost of a policy taken out at September 1 to run for one year. The amount expired is \$40.00.

(4) The inventory of office supplies is valued at \$15.00, the amount used up being \$65.00.

(5) The delivery truck is now two years old. The annual depreciation charge is \$80.00.

(6) The annual depreciation on furniture and fixtures is \$20.00.

(7) The annual depreciation on the building is \$75.00.

(8) The Notes Payable account represents two notes for \$1,000.00 each. On one of these notes, no interest has been charged or entered. The amount of interest accrued is \$10.00.

(9) The interest on the other note payable has been paid in advance, the amount paid being \$30.00. This was charged as interest expense, but \$20.00 of the interest is unexpired.

(10) The business owes the sales clerk one half a month's salary, \$50.00, not yet due.

(11) The business owes the driver of the delivery truck one half of a month's salary, \$35.00, not yet due.

(12) No entry has been made for the taxes for the year. The amount, which will be due in February, is \$70.00.

The bookkeeper now must make adjusting entries to record these facts in the accounts. The adjusting entries are shown in the order in which the information has been given. Before the entry can be made to record the ending inventory, however, the beginning inventory must be closed out. The first step, therefore, is an entry to transfer the debit for the beginning inventory to the Purchases account.

December 31, 1929			
Purchases		\$4,000.00	
Inventory			\$4,000.00
To close the beginning inventory into Purchases			
31			
Inventory		4,500.00	
Purchases			4,500.00
To set up the ending inventory			

CLOSING AND POSTCLOSING ENTRIES

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	31		
Bad Debts		140.00	
Reserve for Doubtful Accounts			140.00
To record estimated losses on bad debts, esti-			
at 1% of the sales			
	31		
Insurance Expense		40.00	
Prepaid Insurance			40.00
To adjust the Prepaid Insurance account			
	31		
Supplies Used		65.00	
Office Supplies			65.00
To record amount of supplies used			
	31		
Delivery Expense		80.00	
Reserve for Depreciation on Delivery Equip-			
ment			80.00
To record depreciation on truck for the year			
	31		
Depreciation on Furniture and Fixtures		20.00	
Reserve for Depreciation on Furniture and Fix-			
tures			20.00
To record depreciation on Furniture and Fixtures			
for year			
	31		
Depreciation on Building		75.00	
Reserve for Depreciation on Building			75.00
To record depreciation on building for year			
	31		
Interest Expense		10.00	
Accrued Interest Payable			10.00
To record interest accrued on note payable			
	31		
Prepaid Interest		20.00	
Interest Expense			20.00
To set up as an asset the amount of interest			
paid in advance, this having been pre-			
viously charged to Interest Expense			
	31		
Sales Salaries		50.00	
Accrued Salaries			50.00
To set up liability for salary accrued			
	31		
Delivery Expense		35.00	
Accrued Salaries			35.00
To set up liability for salary accrued to driver			
of delivery truck			

Taxes	31	70.00	
Accrued Taxes			70.00
To set up liability for taxes for the year			

After these adjusting entries have been made, the asset and liability accounts correctly represent the financial condition of the business, and the expense and income accounts correctly show the expense and income items of the period. The next step is to make the closing entries, which are recorded in the journal immediately following the last of the adjusting entries.

Sales	31	\$35.00	
Sales Returns			\$35.00
To close Sales Returns into Sales			
Sales	31	13,965.00	
Expense and Income			13,965.00
To close Sales Account into Expense and Income			
Expense and Income	31	8,500.00	
Purchases			8,500.00
To transfer cost of goods sold to Expense and Income			
Expense and Income	31	1,200.00	
Sales Salaries			1,200.00
To close Sales Salaries account			
Expense and Income	31	1,015.00	
Delivery Expense			1,015.00
To close Delivery Expense account			
Expense and Income	31	130.00	
Heat and Light			130.00
To close Heat and Light account			
Expense and Income	31	40.00	
Telephone and Telegraph			40.00
To close Telephone and Telegraph account			
Expense and Income	31	20.00	
Interest Expense			20.00
To close Interest Expense account			

CLOSING AND POSTCLOSING ENTRIES 275

	31		
Purchases Discount		125.00	
Expense and Income			125.00
To close Purchases Discount account			
	31		
Expense and Income		140.00	
Bad Debts			140.00
To close Bad Debts account			
	31		
Expense and Income		40.00	
Insurance Expense			40.00
To close Insurance Expense account			
	31		
Expense and Income		65.00	
Supplies Used			65.00
To close Supplies Used account			
	31		
Expense and Income		20.00	
Depreciation on Furniture and Fixtures			20.00
To close Depreciation on Furniture and Fixtures account			
	31		
Expense and Income		75.00	
Depreciation on Building			75.00
To close Depreciation on Building account			
	31		
Expense and Income		70.00	
Taxes			70.00
To close Taxes account			

After the closing entries have been posted, it is found that the credits in the Expense and Income account exceed the debits by \$2,775. This means that the income, represented by the sales and the purchase discounts, exceeds the cost of obtaining the income, the cost being represented by the cost of goods sold, the operating expenses, and the interest expenses, by the amount stated. This item represents the net income, and since Yates and McClure share profits equally, each should be credited with one half of this amount. The following entry is, therefore, made to close the Expense and Income account:

31

Expense and Income	\$2,775.00	
J. W. Yates, Capital		\$1,387.50
H. H. McClure, Capital		1,387.50
To close Expense and Income and to credit each partner with his share of the net income of the period		

All expense and income accounts are now closed and only the balance sheet accounts remain open. The accounts as they appear after all entries have been posted are illustrated in the pages which follow. It will be understood that not all of the entries made during the year can be shown here, but the totals for the entire year are shown as a single item.

LEDGER ACCOUNTS OF YATES AND McCLURE

CASH

1929	
Dec. 31 Balance	350.00

NOTES RECEIVABLE

1929	
Dec. 31 Balance	100.00

ACCOUNTS RECEIVABLE

1929	
Dec. 31 Balance	2,200.00

RESERVE FOR DOUBTFUL ACCOUNTS

1929		1929	
Dec. 31 Balance	280.00	Dec. 31 Balance	140.00
		31 Allowance for year	140.00
	<u>280.00</u>		<u>280.00</u>
		1930	
		Jan. 1 Balance	280.00

MERCHANDISE INVENTORY

1929		1929	
Jan. 1 Beginning Inventory	4,000.00	Dec. 31 To Purchases	4,000.00
Dec. 31 Ending Inventory	<u>4,500.00</u>		

PREPAID INSURANCE

1929		1929	
Sept. 1 Policy for 1 year	120.00	Dec. 31 Insurance Expired	40.00
		31 Balance	80.00
	<u>120.00</u>		<u>120.00</u>
1930			
Jan. 1 Balance	80.00		

OFFICE SUPPLIES

1929		1929	
Dec. 31 Total for the year	80.00	Dec. 31 Supplies Used	65.00
		31 Balance	15.00
	<u>80.00</u>		<u>80.00</u>
1930			
Jan. 1 Balance	15.00		

PREPAID INTEREST

1929	
Dec. 31 Interest on note	20.00

DELIVERY EQUIPMENT

1929	
Dec. 31 Balance	500.00

RESERVE FOR DEPRECIATION ON DELIVERY EQUIPMENT

1929		1929	
Dec. 31 Balance	160.00	Dec. 31 Balance	80.00
		31 Additional Allowance	80.00
	<u>160.00</u>		<u>160.00</u>
		1930	
		Jan. 1 Balance	160.00

FURNITURE AND FIXTURES

1929	
Dec. 31 Balance	200.00

ELEMENTS OF ACCOUNTING

RESERVE FOR DEPRECIATION ON FURNITURE AND FIXTURES

1929		1929	
Dec. 31 Balance	60.00	Dec. 31 Balance	40.00
		31 Additional Allowance	20.00
	<u>60.00</u>		<u>60.00</u>
		1930	
		Jan. 1 Balance	60.00

BUILDING

1929		1929	
Dec. 31 Balance	3,000.00	Dec. 31 Balance	800.00
		31 Additional allowance	75.00
	<u>875.00</u>		<u>875.00</u>
		1930	
		Jan. 1 Balance	875.00

RESERVE FOR DEPRECIATION ON BUILDING

LAND

1929			
Dec. 31 Balance	500.00		

ACCOUNTS PAYABLE

		1929	
		Dec. 31 Balance	350.00

NOTES PAYABLE

		1929	
		Dec. 31 Balance	2,000.00

ACCRUED INTEREST PAYABLE

		1929	
		Dec. 31 Interest accrued	10.00

CLOSING AND POSTCLOSING ENTRIES 279

ACCRUED SALARIES

		1929	
	Dec. 31	Accrued sales salaries	50.00
		Accrued delivery salaries	35.00

ACCRUED TAXES

		1929	
	Dec. 31	Taxes for the year	70.00

J. W. YATES, CAPITAL

1929		1929	
Dec. 31	Balance	Dec. 31	Balance
	3,787.50	31	Share of net income
			1,387.50
	<u>3,787.50</u>		<u>3,787.50</u>
		1930	
		Jan. 1	Balance
			3,787.50

H. H. MCCLURE, CAPITAL

1929		1929	
Dec. 31	Balance	Dec. 31	Balance
	3,787.50	31	Share of net income
			1,387.50
	<u>3,787.50</u>		<u>3,787.50</u>
		1930	
		Jan. 1	Balance
			3,787.50

SALES

1929		1929	
Dec. 31	Sales Returns	Dec. 31	Total for the year
	35.00		14,000.00
	31 Net Sales, to Ex-		
	pense and In-		
	come		
	13,965.00		
	<u>14,000.00</u>		<u>14,000.00</u>

SALES RETURNS

1929		1929	
Dec. 31	Total for the year	Dec. 31	To Sales
	35.00		35.00

ELEMENTS OF ACCOUNTING

PURCHASES

1929			1929		
Dec. 31	Total for the year	9,000.00	Dec. 31	Ending Inventory	4,500.00
	31 Beginning Inventory	4,000.00		31 Closed to Expense and Income	8,500.00
		<u>13,000.00</u>			<u>13,000.00</u>

SALES SALARIES

1929			1929		
Dec. 31	Total for the year	1,150.00	Dec. 31	Expense and Income	1,200.00
	31 Salaries accrued	50.00			
		<u>1,200.00</u>			<u>1,200.00</u>

DELIVERY EXPENSE

1929			1929		
Dec. 31	Total for the year	900.00	Dec. 31	Expense and Income	1,015.00
	31 Depreciation on truck	80.00			
	31 Salary of truck driver	35.00			
		<u>1,015.00</u>			<u>1,015.00</u>

HEAT AND LIGHT

1929			1929		
Dec. 31	Total for the year	<u>130.00</u>	Dec. 31	Expense and Income	<u>130.00</u>

TELEPHONE AND TELEGRAPH

1929			1929		
Dec. 31	Total for the year	<u>40.00</u>	Dec. 31	Expense and Income	<u>40.00</u>

BAD DEBTS

1929			1929		
Dec. 31	Estimates loss for the year	<u>140.00</u>	Dec. 31	Expense and Income	<u>140.00</u>

INSURANCE EXPENSE

1929			1929	
Dec. 31	Insurance expired	40.00	Dec. 31	Expense and Income 40.00
		<u>40.00</u>		

OFFICE SUPPLIES USED

1929			1929	
Dec. 31	Used during the year	65.00	Dec. 31	Expense and Income 65.00
		<u>65.00</u>		

DEPRECIATION ON FURNITURE AND FIXTURES

1929			1929	
Dec. 31	Allowance for the year	20.00	Dec. 31	Expense and Income 20.00
		<u>20.00</u>		

DEPRECIATION ON BUILDING

1929			1929	
Dec. 31	Allowance for the year	75.00	Dec. 31	Expense and Income 75.00
		<u>75.00</u>		

TAXES

1929			1929	
Dec. 31	Accrued for the year	70.00	Dec. 31	Expense and Income 70.00
		<u>70.00</u>		

PURCHASES DISCOUNT

1929			1929	
Dec. 31	Expense and Income	125.00	Dec. 31	Total for the year 125.00
		<u>125.00</u>		

INTEREST EXPENSE

1929			1929	
Nov. 1	Interest on note	30.00	Dec. 31	Prepaid interest 20.00
Dec. 31	Interest accrued	10.00	31	Expense and Income 20.00
		<u>40.00</u>		
				<u>40.00</u>

In the tracing of the closing of the accounts of Yates and McClure, nothing has been said about the preparation of the accounting reports. These reports may be prepared as soon as the adjusting entries are made, or the preparation

EXPENSE AND INCOME

1929		1929			
Dec. 31	Cost of goods sold	8,500.00	Dec. 31	Net sales	13,965.00
31	Sales salaries	1,200.00	31	Purchases Discount	125.00
31	Delivery expense	1,015.00			
31	Heat and light	130.00			
31	Telephone and tele- graph	40.00			
31	Bad debts	140.00			
31	Insurance	40.00			
31	Office supplies used	65.00			
31	Dep. on Fur. and Fix.	20.00			
31	Depreciation on building	75.00			
31	Taxes	70.00			
31	Interest expense	20.00			
31	J. W. Yates, Capi- tal	1,387.50			
31	H. H. McClure, Capital	1,387.50			
		14,090.00			14,090.00

may be delayed until the Expense and Income account has been closed. The balance sheet accounts would then show the balances of the asset, liability, and proprietorship items, while the Expense and Income account would show most of the expense and income items. In fact, the bookkeeper will have to go outside the Expense and Income account for only two items which appear on the statement of income and expense. The first of these is the gross sales and the sales returns, which must be obtained from the Sales account. The second item is the composition of the cost of goods sold which is shown in the Expense and Income account as a single item. To find the beginning inventory, the purchases, and the ending inventory, it is necessary to refer back to the Purchases account. The accounting reports in practice are not usually prepared directly from the accounts, as will be explained in the next chapter, but from a working sheet containing the trial balance and the adjustments. The statements of Yates and McClure follow.

YATES AND MCCLURE

BALANCE SHEET		DECEMBER 31, 1929	
<i>Assets</i>		<i>Liabilities</i>	
Current Assets		Current Liabilities	
Cash	350.00	Accounts Payable	350.00
Notes Receivable	100.00	Notes Payable	2,000.00
Accounts Receivable	2,200.00	Accrued Interest	10.00
Less: Reserve for Doubtful Acct.	280.00	Accrued Salaries	85.00
	<u>1,920.00</u>	Accrued Taxes	70.00
Inventory	4,500.00	Total Liabilities	<u>2,515.00</u>
Total Current Assets	6,870.00		
Prepaid Expenses		Proprietorship	
Prepaid Insurance	80.00	J. W. Yates, Capital	3,787.50
Office Supplies	15.00	H. H. McClure, Capital	3,787.50
Prepaid Interest	20.00	Total Proprietorship	<u>7,575.00</u>
Total Prepaid Expenses	115.00		
Fixed Assets			
Delivery Equipment	500.00		
Less: Res. for Depreciation	160.00		
	<u>340.00</u>		
Furniture and Fixtures	200.00		
Less: Res. for Depreciation	60.00		
	<u>140.00</u>		
Building	3,900.00		
Less: Res. for Depreciation	875.00		
	<u>2,125.00</u>		
Land	500.00		
Total Fixed Assets	3,105.00		
Total Assets	<u>10,090.00</u>	Total Liabilities and Proprietorship	<u>10,090.00</u>

YATES AND McCLURE

STATEMENT OF INCOME AND EXPENSE FOR YEAR ENDING DECEMBER 31,
1929

Gross Sales		14,000.00	
Less: Sales Returns		35.00	
Net Sales			13,965.00
Cost of Goods Sold:			
Beginning Inventory	4,000.00		
Purchases	9,000.00		
Total Goods Available for Sale	13,000.00		
Less Ending Inventory	4,500.00		
Cost of Goods Sold			8,500.00
Gross Profit			5,465.00
Operating Expenses			
Selling Expenses			
Sales Salaries	1,200.00		
Delivery Expense	1,015.00		
Total Selling Expenses		2,215.00	
Administrative Expenses			
Heat and Light	130.00		
Telephone and Telegraph	40.00		
Bad Debts	140.00		
Insurance	40.00		
Office Supplies Used	65.00		
Depreciation, Fur. and Fixt.	20.00		
Depreciation on Building	75.00		
Taxes	70.00		
Total Administrative Expenses		580.00	
Total Operating Expenses			2,795.00
Net Profit			2,670.00
Other Income			
Purchases Discount			125.00
Gross Income			2,795.00
Nonoperating Expense			
Interest Expense			20.00
Net Income			2,775.00
Distribution of Income:			
To J. W. Yates, Capital	1,387.50		
To H. H. McClure, Capital	1,387.50		
	2,775.00		

The postclosing entries are made after the expense and income accounts have been closed.—In the books of Yates and McClure which have been illustrated, three postclosing entries must be made. These are entries to reverse Prepaid Interest, Accrued Interest Payable, and Accrued Salaries. The necessity for each of these entries will be explained.

As the account for Prepaid Interest now stands, there is a debit of \$20. Notes Payable do not run for a very long time, and it is obvious in this case that this prepaid interest will be an expense of the next period, as the note has only four months more to run. Instead of waiting until the close of the next year to charge this as an expense, it should be charged at once by the following entry:

DECEMBER 31, 1929

Interest Expense	20.00	
Prepaid Interest		20.00
To reverse the entry setting up prepaid interest		

The accrued interest payable will probably be paid during the next year, for notes payable ordinarily run for less than a year. In the case of the note of Yates and McClure, the interest will have to be paid when the note comes due on April 30, 1930. On that date, the firm will have to pay interest charges of \$30, of which \$20 will be an expense of the year 1930, and \$10 will be a liquidation of the liability for accrued interest shown on the balance sheet of December 31, 1929. Of course, it would be possible to make an entry at that time debiting the liability account for the \$10, but it is better to arrange the accounts so that the entire \$30 can be debited to Interest Expense when the interest is paid. This is accomplished by means of this entry:

DECEMBER 31, 1929

Accrued Interest Payable	10.00	
Interest Expense		10.00
To reverse the entry setting up the liability for accrued interest expense		

Now, when the payment of the interest expense is made, the entire \$30 may be debited to Interest Expense. The credit posted from the above entry will be an offset to the debit to the amount of \$10, with the result that only \$20 of the payment will be transferred to the Expense and Income account at the close of 1930.

The accrued salaries involve a problem similar to that of the accrued interest. When the salaries are paid in January, 1930, it is simpler if the entire amount paid to the sales clerk and the truck driver can be debited to Sales Salaries and Delivery Expense respectively. This can be done if the following reversing or postclosing entry is made:

DECEMBER 31, 1929

Accrued Salaries	85.00	
Sales Salaries		50.00
Delivery Expense		35.00
To reverse the entry setting up liability for accrued salaries		

The postclosing trial balance is a final check.—The student should compare the postclosing trial balance of Yates and McClure with the beforeclosing trial balance and with the balance sheet. Interest Expense shows a debit balance for the amount of interest which has been paid in advance but which will be an expense of the next period. Sales Salaries and Delivery Expense show credit balances. The taking of the postclosing trial balance ends the process of adjusting and closing the books of Yates and McClure.

YATES AND McCLURE

POSTCLOSING TRIAL BALANCE, DECEMBER 31, 1929

	Debit	Credit
Cash	350.00	
Notes Receivable	100.00	
Accounts Receivable	2,200.00	
Reserve for Doubtful Accounts		280.00
Merchandise Inventory	4,500.00	
Prepaid Insurance	80.00	
Office Supplies	15.00	
Delivery Equipment	500.00	
Reserve for Depreciation on Delivery Equipment		160.00
Furniture and Fixtures	200.00	
Reserve for Depreciation on Furniture and Fixtures		60.00
Building	3,000.00	
Reserve for Depreciation on Building		875.00
Land	500.00	
Accounts Payable		350.00
Notes Payable		2,000.00
Accrued Taxes		70.00
J. W. Yates, Capital		3,787.50
H. H. McClure, Capital		3,787.50
Sales Salaries		50.00
Delivery Expense		35.00
Interest Expense	10.00	
	<u>11,455.00</u>	<u>11,455.00</u>

QUESTIONS FOR DISCUSSION

1. Explain the purpose of making the so called closing and postclosing entries.
2. Can you distinguish between adjusting and closing entries? Is there any decided line of demarcation? Why try to make a distinction?
3. What accounts are closed at the end of the accounting period?
4. Why not close an Allowance for Depreciation account into the asset account upon which it depends, immediately upon setting up the account? If not then, when should this be done?
5. The trial balance for John Nelson shows an Allowance for Depreciation on Building of \$4,000. The building is valued at \$10,000. At the end of 1929 another \$1,000 is set up. On December 31 of that year what is the amount of the allowance in the balance sheet? In the statement of income and expense?

6. When an Allowance for Depreciation is set up, the allowance is credited and an expense account is debited. At the end of the period, the depreciation expense accounts go into the Expense and Income account. Can you think of any process one might follow to lessen the number of items in the Expense and Income account?

7. What is the necessity for a postclosing trial balance? What check can you use to prove its accuracy?

8. How is the statement of income and expense a check upon the accuracy of the balance sheet at the end of the accounting period?

9. When the closing process is completed at the end of a fiscal period, what accounts remain open?

10. What do you understand by ruling accounts? How would you rule a Cash account at closing time?

11. What entries are made respecting inventories at the end of the accounting period?

12. How is the Expense and Income account closed?

13. What is done with a Drawing or Personal account at the end of an accounting period?

14. The balance sheet of A. B. Allison contains, among others, the following accounts:

Fixed Assets:

Furniture and Fixtures	\$300	
Less allowance for depreciation	30	\$270
Delivery Equipment	800	
Less allowance for depreciation	80	720
Machinery	2,000	
Less allowance for depreciation	200	1,800
Building	5,000	
Less allowance for depreciation	100	4,900
Total fixed assets		\$7,690

How long has the business been in operation? What adjusting entries would you make to secure conformity between the balance sheet and the ledger accounts?

15. The statement of income and expense of R. A. Hoyt contains, among others, the following items:

Sales		\$10,000.00
Cost of Goods Sold		
Inventory Jan. 1, 1929	\$3,000.00	
Purchases	<u>7,000.00</u>	
	10,000.00	
Less Inventory Dec. 31, 1929	<u>4,000.00</u>	
Cost of Goods Sold		<u>6,000.00</u>
Gross income on sales		\$4,000.00

Indicate the entries necessary to close these accounts.

16. How is the amount to be set aside each period as allowance for depreciation determined?

17. Why do we not set aside an allowance for depreciation on land? Doesn't land depreciate or appreciate? Can you think of anything an accountant might do to indicate the true value of land?

PROBLEMS

1. The following is the trial balance of A. B. Ludwig on December 31, 1929:

Cash	\$3,270	
Notes Receivable	4,000	
Accounts Receivable	2,900	
Merchandise Inventory	3,250	
Furniture and Fixtures	500	
Delivery Equipment	500	
Notes Payable		\$1,850
Accounts Payable		3,500
A. B. Ludwig, Capital		7,800
A. B. Ludwig, Drawing	50	
Sales		9,000
Purchases	7,000	
Expenses	680	
	<u>\$22,150</u>	<u>\$22,150</u>

The inventory on December 31, is \$3,450. Allowances of ten per cent are to be set aside on each of the accounts, Furniture and Fixtures, and Delivery Equipment.

Make a balance sheet and statement of income and expense, and check the results.

2. Set up the various accounts called for in problem 1. Adjust and close the accounts.

3. The following accounts are taken from the books of R. E. Lodge on December 31, 1929.

Cash	\$600
Administration Expense	2,100
R. E. Lodge	5,600
Purchases	9,700
Notes Receivable	200
Furniture and Fixtures	500
Notes Payable	900
Selling Expense	1,100
Sales	12,500
Accounts Receivable	3,300
Mdse. Inventory Jan. 1, 1929	2,900
Accounts Payable	2,300
Delivery Equipment	900

The Inventory on December 31, 1929 is \$4,000.

- (1) Prepare a trial balance arranging the accounts in the proper order.
- (2) Make a balance sheet and statement of income and expense.
- (3) Set up the accounts named.
- (4) Adjust and close the accounts and rule the accounts that balance.

4. Give the entries necessary to close the accounts of A. J. Lynn as shown in problem 1, Chapter XV.

5. Give the entries necessary to close the accounts of Orval Loomis, problem 2, Chapter XV.

6. Give the entries necessary to close the accounts of M. A. Sells, problem 7, Chapter XVII.

REFERENCES FOR FURTHER STUDY

THE ADJUSTING AND CLOSING ENTRIES: Hodge and McKinsey, *Principles of Accounting*, pp. 318-330

CLOSING THE BOOKS: Kester, *Accounting Theory and Practice*, 3d. ed., Vol. I, pp. 274-277

CHAPTER XIX

THE WORKING SHEET

PURPOSES OF THIS CHAPTER

1. To show how the work of preparing the financial statements is simplified by means of the working sheet
 2. To illustrate the method of using the working sheet
-

If accountants had not found a short-cut method of making the adjusting, closing, and postclosing entries in the accounts and preparing the accounting reports, the process would be a very long one indeed. Moreover, if one were to do this work by the aid of the ledger accounts alone, he would be almost certain to make mistakes. Fortunately accountants have worked out a device which simplifies the work of preparing the statements and closing the accounts and which enables them to see the whole process at a glance.

The working sheet is the device; it is used in assembling the facts necessary for adjusting and closing the accounts and preparing the financial reports.—It is not a part of the accounting records, neither is it an accounting report. It is merely a tool used to facilitate the bookkeeper's work. The working sheet is ruled and the data are arranged as shown in the illustration of a working sheet on pages 294 and 295.

The working sheet is prepared after the beforeclosing trial balance has been taken, but before the adjusting and closing entries have been made in the journal. It shows the balances of the accounts when the trial balance was taken:

the adjustments which must be made in each of the accounts; the balances of each of the accounts after adjustment; and the net income or net loss for the period. The balances after adjustment, are arranged in different columns according to whether they are to be shown in the balance sheet or in the statement of income and expense. The work of preparing the financial statements and of making the adjusting, closing, and postclosing entries is, therefore, greatly simplified because all of the necessary data are brought together on the one sheet. The use of each column of the working sheet will now be explained in detail.

The ledger accounts are listed in the first column of the working sheet.—The use of the working sheet will be illustrated by the working sheet prepared in closing the accounts of Yates and McClure as given in the preceding chapter. This working sheet is shown on pages 294 and 295 and the student should refer to it constantly throughout the discussion which follows. In the first column of the working sheet are listed the names of the ledger accounts in the order in which they appear on the beforeclosing trial balance. The names of additional accounts which it was found necessary to open during the process of adjusting the books are listed below the names of the accounts which appear in the trial balance.

The first two money columns are used for the trial balance debits and credits.—The trial balance is the starting point in the process of adjusting the accounts and preparing the financial statements. The beforeclosing trial balance is therefore entered in the first two money columns of the working sheet. As a matter of form and appearance, the totals of the trial balance may be dropped down and entered on the same line with the other totals to be placed on the working sheet. Of course, this position cannot be determined at the time the trial balance is prepared, and it may

be found desirable to enter the totals of the trial balance on the next line below the last item of the trial balance.

The third and fourth money columns are used for the adjusting entries.—The debits and credits entered in these two columns are exactly the same as the debits and credits of the adjusting entries given in the preceding chapter in connection with the accounts of Yates and McClure.

For example, the amount of the beginning inventory, which is a debit to Purchases account at the close of the period and a credit to Inventory, is entered on the debit side of the adjustment column on the same line with the balance of the Purchases account and on the credit side of the adjustment column on the line with the Inventory of January 1. The ending inventory is entered as a debit to Inventory and a credit to Purchases. Other adjusting entries listed in the preceding chapter will be found in the adjustments columns. Of course, the adjusting entries are entered on the working sheet before they are entered in the journal, since one of the primary purposes of the working sheet is to make easier the task of preparing the adjusting entries for the journal. The total of the debit column of the adjustment section equals the total of the credit column because each entry is made up of equal debits and credits. The total of these columns is always taken as soon as all of the adjustments have been entered to make sure that no mistake has been made up to this point.

The fifth and sixth money columns are used for the Expense and Income accounts.—The amounts entered in the debit and credit columns of the Expense and Income section are the balances that are to appear on the statement of income and expense and in each case represent the balances that will appear in the expense and income accounts in the ledger after the adjustments have been entered in the books. All

YATES AND MCCLURE

WORKING SHEET

DECEMBER 31, 1929

Name of Account	Trial Balance		Adjustments		Expense and Income		Balance Sheet	
	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit
Cash	350.00						350.00	
Notes Receivable	100.00						100.00	
Accounts Receivable	2,200.00						2,200.00	
Reserve for Doubtful Accounts		140.00						280.00
Inventory January 1	4,000.00			140.00			4,500.00	
Prepaid Insurance	120.00		4,500.00				80.00	
Office Supplies	80.00			40.00			15.00	
Delivery Equipment	500.00			65.00			500.00	
Reserve for Depreciation-Delivery Equipment		80.00						160.00
Furniture and Fixtures	200.00			80.00			200.00	
Reserve for Depreciation, Furniture and Fixtures		40.00						60.00
Building	3,000.00			20.00			3,000.00	
Land	500.00			75.00			500.00	
Accounts Payable		350.00						350.00
Notes Payable		2,000.00						2,000.00
J. W. Yates, Capital		2,400.00						2,400.00
H. H. McClure, Capital		2,400.00						2,400.00
Sales		14,000.00				14,000.00		
Sales Returns	35.00		4,000.00		35.00			
Sales	9,000.00				8,500.00			
Purchases	1,150.00		50.00		1,200.00			
Sales Salaries			35.00		1,015.00			
Delivery Expense	900.00		80.00		130.00			
Heat and Light	130.00				40.00			
Telephone and Telegraph	40.00				20.00			
Interest Expense	30.00		10.00					
Purchases Discount		125.00		20.00				
	22,335.00	22,335.00						

THE WORKING SHEET

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Bad Debts	140.00	140.00		
Insurance Expense	40.00	40.00		
Supplies Used	65.00	65.00		
Depreciation on Furniture and Fixtures	20.00	20.00		
Depreciation on Building	75.00	75.00		
Accrued Interest Payable			10.00	10.00
Prepaid Interest			{ 35.00	
			{ 50.00	
Accrued Salaries	20.00	20.00		
Taxes	70.00	70.00	70.00	70.00
Accrued Taxes				
	9,105.00	9,105.00		
			9,105.00	
Net Income				
Total				
			11,465.00	11,465.00
			14,125.00	14,125.00
			2,775.00	2,775.00
			11,465.00	11,465.00
			14,125.00	14,125.00
			11,465.00	11,465.00
			14,125.00	14,125.00
			2,775.00	2,775.00
			11,465.00	11,465.00
			14,125.00	14,125.00
			2,775.00	2,775.00
			11,465.00	11,465.00
			14,125.00	14,125.00
			2,775.00	2,775.00
			11,465.00	11,465.00
			14,125.00	14,125.00
			2,775.00	2,775.00
			11,465.00	11,465.00
			14,125.00	14,125.00
			2,775.00	2,775.00
			11,465.00	11,465.00
			14,125.00	14,125.00
			2,775.00	2,775.00
			11,465.00	11,465.00
			14,125.00	14,125.00
			2,775.00	2,775.00
			11,465.00	11,465.00
			14,125.00	14,125.00
			2,775.00	2,775.00
			11,465.00	11,465.00
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			11,465.00	11,465.00
			14,125.00	14,125.00
			2,775.00	2,775.00
			11,465.00	11,465.00
			14,125.00	14,125.00
			2,775.00	2,775.00
			11,465.00	11,465.00
			14,125.00	14,125.00
			2,775.00	2,775.00
			11,465.00	11,465.00
			14,125.00	14,125.00
			2,775.00	2,775.00
			11,465.00	11,465.00
			14,125.00	14,125.00

the income is entered on the credit side since income accounts in the ledger show a credit, while the cost of goods sold and the expenses are entered on the debit side, these accounts having debit balances in the ledger. If the total income exceeds the cost of obtaining that income, the credit side will have the larger total, while the reverse will be true if the business has suffered a net loss during the period. Since all the income and all the expenses are entered in these two columns of the working sheet, the preparation of the statement of income and expense becomes a relatively simple matter. It is necessary to go outside the two expense and income columns for the items which enter into the cost of goods sold, however, since only the cost of goods sold or the balance of the Purchases account, after adjustment, is given in the Expense and Income section of the working sheet. The necessary data, which include the amount of the beginning inventory, the purchases, and the ending inventory, can be found on the Purchases line of the working sheet.

The last two columns of the working sheet are used for the balance sheet accounts.—The items that are to appear on the balance sheet are entered in the last two columns, these being the balances after the adjustments have been made. It should be noticed, however, that the balances shown in the capital accounts are the same as the balances which appear in the beforeclosing trial balance. The adjustment of the capital accounts could not be made in the adjustment column because the amount of the profit was not known until after all adjustments for accrued, deferred, and estimated items, also for inventories, had been made. The balances of the capital accounts which were entered in the beforeclosing trial balance are, therefore, carried over to the balance sheet section unchanged. With this one exception, the balances shown in the balance sheet section of the work-

ing sheet are the same as the amounts to be shown on the balance sheet. Of course, the reserves for depreciation and for doubtful accounts are on the credit side of the balance sheet section along with the liabilities and the capital accounts, whereas, on the balance sheet, each of these reserves is deducted from the value of the asset to which it relates. Since the reserve accounts in the ledger have credit balances, they must be entered on the credit side of the balance sheet section of the working sheet. The totals of the debit side and of the credit side of the balance sheet section are brought down on the next line after the last entry, but these totals are not equal because the net income has not yet been added to the capital accounts. If the business has made a profit, the debit side of the balance sheet section will have the larger total, while the reverse will be true if the business has had a loss for the period.

The working sheet is balanced by adding the profit for the period to the debits in the Expense and Income section and to the credits in the Balance Sheet section.—The reason for this will be apparent to the student if he thinks of the relation of the Expense and Income account to the capital account. The addition of the profit to the debit side of the Expense and Income section balances this section because the profit is equal to the difference between the income and the cost of making the income. The same figure balances the balance sheet section because the net worth has increased by the amount of the profits for the period, and the profits have not yet been added to the capital account. Since capital is shown on the credit side, the profit must be added to the credits in the balance sheet section. If the business has had a loss, the debits in the Expense and Income section are larger than the credits, and this section is balanced by adding the amount of the loss to the credit side.

The credits in the balance sheet section are the larger because the loss would represent a decrease in the proprietorship for which no deduction has yet been made. The balance sheet section is balanced by adding the amount of the loss to the debit side.

The working sheet does not take the place of the balance sheet and the statement of income and expense.—As has been said, the working sheet is used only in the preparation of the financial statements and is in no sense a substitute for them. In fact, the working sheet, as its name implies, is only a device to aid in the work of adjusting and closing the books and in preparing the financial statements. It does not leave the accounting department. The balance sheet and the statement of income and expense must be prepared in the form previously explained.

QUESTIONS FOR DISCUSSION

1. What is the purpose of a working sheet? Does it serve as a substitute for the various reports?
2. Enumerate the various steps in making a working sheet. Explain the form.
3. What does a postclosing trial balance prove? Should not a postclosing trial balance be included in the working sheet?
4. Outline the accounting procedure followed at the close of the accounting period.
5. What adjusting entries would be necessary for each of the following types of industry: Banking, clothing, garage, theater, and grocery?
6. What adjusting entries should be made in a case where depreciation on delivery equipment for the year is \$112, and on building \$250?
7. What adjusting entry is necessary to set up an Allowance for Bad Debts? Should the estimate of the amount to be set up for uncollectible accounts be based on sales, or on Accounts Receivable, or on both Accounts and Notes Receivable?
8. Interest has accrued on notes payable to the amount of \$5. What adjusting entry should be made?

9. At the end of a fiscal period accrued wages are \$96. What adjusting entry is necessary? Should you make a postclosing entry in this case?

10. How does an accountant determine what additional accounts to add in a working sheet?

PROBLEMS

1. You are closing the books of A. S. Walsh on December 31, 1929, and you find the following adjustments necessary:

- (1) A delivery truck costing \$2,400 should have an allowance of 6% set up.
- (2) An allowance for losses on bad debts should be set up. It is decided that this allowance should be 2% of sales, which were \$50,000.
- (3) The beginning inventory is \$8,000 and the ending inventory is \$10,000. Purchases are \$39,000.
- (4) There is accrued interest on notes payable of \$7.
- (5) There is accrued interest on notes receivable of \$12.
- (6) One-third of a prepaid insurance account of \$600 has been used up.
- (7) A typewriter costing \$50 has an estimated life of five years. It is thought it will sell for \$10 at the end of that period. Set up the allowance for depreciation for the year.
- (8) There are accrued wages of \$100. Half of this is due to the truck driver and the remainder to a sales clerk.
- (9) Stationery and stamps to the amount of \$10 have been used. This is one-fourth of the office supplies account.
- (10) Land which has been entered at a cost of \$10,000 has been appraised and estimated to have increased in value by \$5,000.
- (11) A delivery truck costing \$3,000 is estimated to have a scrap value of \$500 at the end of five years.
- (12) An account of \$12 was charged to selling expense when it should have been charged to administrative expense.

Make the entries necessary to record the information.

2. The following is the trial balance for Karl Moser:

KARL MOSER

TRIAL BALANCE, JUNE 30, 1930

Cash	\$200	
Notes Receivable	50	
Accounts Receivable	196	
Merchandise Inventory	1,800	
Furniture and Fixtures	100	
Notes Payable		\$110
Accounts Payable		240
Karl Moser, Capital		2,938
Karl Moser, Personal	25	
Sales		400
Purchases	1,000	
Buying Expense	30	
Selling Expense	175	
Administration Expense	112	
	<u>\$3,688</u>	<u>\$3,688</u>

The ending inventory is \$2,000.

From the above data prepare:

- (1) Working sheet,
- (2) Adjusting and closing entries,
- (3) Balance sheet,
- (4) Statement of income and expense,
- (5) Postclosing trial balance.

3. Prepare adjusting entries for the following:

- (1) Due garage for repairs, bill not yet entered on the books, \$14.00.
- (2) Advertising supplies on hand, previously charged to Advertising Expenses, \$65.00.
- (3) Account of John Jones amounting to \$70.00 is found to be worthless.
- (4) An error in preparing a sales invoice has resulted in the customer having been overcharged \$18.00.
- (5) The salary of the driver of the delivery truck, \$75.00, has been charged to Office Salaries.
- (6) Interest accrued on notes receivable, \$35.00.
- (7) Interest accrued on notes payable, \$50.00.
- (8) Interest received but not yet earned \$10.00. A credit was made to Interest Income when received.
- (9) Rent due but not paid, \$25.00.
- (10) The property taxes for the year are estimated to be \$180.00.

4. The following trial balance was taken from the books of Leese and Wilkinson, December 31, 1929:

Trial Balance

Cash on Hand	\$500	
Cash in Bank	1,500	
Sales		\$575,000
Discount on Purchases		10,000
Interest on Notes Receivable		500
Accounts Receivable	75,000	
Notes Receivable	5,000	
Capital Stock, Common		100,000
Land	25,000	
Buildings	100,000	
Equipment	25,000	
Motor Trucks	5,000	
Insurance	1,000	
Taxes	2,500	
Purchases	450,000	
Cash Discount on Sales	10,000	
Wages of Men in Warehouse	12,500	
Salaries of Department Managers	5,000	
Salaries of Office Assistant	2,500	
Truck Drivers	2,500	
Auto Expense	3,500	
Inventories, Jan. 1, 1929	150,000	
Inventories of Auto Accessories, etc., Jan. 1, 1929	1,500	
Inventories of Stationery, etc. Jan. 1, 1929	1,000	
Office supplies	1,500	
Advertising	25,000	
Salesmen's Salaries	10,000	
Salesmen's Commissions	5,500	
Interest on Notes Payable	5,000	
Fund for Payment of Dividends	6,000	
Notes Payable		125,000
Accounts Payable		69,000
Dividends Payable		6,000
Land not used in Business	75,000	
Investment in Commercial Hotel	27,000	
Surplus		148,500
	<u>\$1,034,000</u>	<u>\$1,034,000</u>

The inventories on December 31, 1929 were:

Merchandise, \$162,500; auto accessories, etc., \$1,000; stationery, etc., \$750; \$250 of the insurance and \$750 of the taxes paid apply to 1930. The depreciation on building for 1929 is \$5,000; on equipment, \$2,500. Land used in the business has been appraised at \$37,500.

- (1) Prepare a working sheet.
- (2) Make the adjusting and closing entries.
- (3) Prepare a balance sheet.
- (4) Prepare a statement of income and expense.

REFERENCES FOR FURTHER STUDY

THE WORKING SHEET: Kester, *Accounting Theory and Practice*, 3d. ed., Vol. I, pp. 247-257

CLOSING THE BOOKS AT THE END OF THE FISCAL PERIOD: Folts and Stillman, *Interpretive Accounting*, pp. 261-277

ACCOUNTANT'S WORKING PAPERS: McCarty and Amidon, *Survey Course in Accounting*, pp. 249-260

WORKING SHEETS: Woodbridge, *Elements of Accounting*, pp. 205-222

CHAPTER XX

HOW THE BALANCE SHEET AND THE STATEMENT OF INCOME AND EXPENSE ARE PREPARED FOR A MANUFACTURING CONCERN

PURPOSES OF THIS CHAPTER

1. To explain how the financial reports and the accounting records of a manufacturing concern differ from those of a mercantile concern
 2. To explain how the reports of a manufacturing concern are prepared at the end of the accounting period
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In the preceding chapters attention has been directed primarily to the mercantile or trading concern, that is, to the business which buys and sells goods but is not engaged in manufacture. There were two reasons for so placing the emphasis. First, the accounts of the trading concern are somewhat simpler than those of the manufacturing concern, and it is believed that a beginning student can understand an accounting system for such a concern more easily than he can understand the principles of manufacturing accounts. Second, although there are some important differences, the fundamental principles are the same, and having mastered one system of accounts, the student need have little difficulty in learning the peculiarities of the other. We are now ready to study the principles of manufacturer's accounts, emphasizing as before the preparation of the balance sheet and the statement of income and expense.

The methods of collecting and recording the information for the reports of a manufacturing concern do not materially differ from the methods followed by a mercantile concern.—Data must first be recorded on business papers and are then entered in books of original entry. The columns of the journals used by the manufacturing concern differ from those which we have discussed and illustrated because the expenses are somewhat different in nature. The manufacturing concern must have a sales journal, a purchases journal, a cash receipts journal, a cash disbursements journal, a general journal, and other journals similar in purpose to those of a trading concern. There is frequently this difference, that when there are a great many transactions, the entries may be made in the accounts directly from the sales or purchase invoices in order to save the labor of recording all such transactions in a journal. In such cases the entry in the general ledger is posted from a journal entry recording the total sales or purchases, as the case may be. Indeed, this is not a peculiarity of manufacturing accounting, as department stores and many other retail stores enter a debit to the account of the customer for a sale made to him without recording the sales ticket in a sales journal. Of course the money columns used in the various journals differ according to the needs of the business.

The principal differences between methods of accounting for manufacturing concerns and methods of accounting for trading concerns are to be found in the procedure for preparing the balance sheet and the statement of income and expense, and in closing the accounts. Before the method of preparing the accounting reports for the manufacturing concern is discussed, however, it will be necessary to notice how the reports themselves differ from the reports which have been discussed.

The manufacturing concern has three inventories of merchandise which must be shown in the accounting reports.— On pages 310 and 311 is shown a working sheet for the Spring Manufacturing Company, and on pages 313 and 314 are the balance sheet and the statement of income and expense which were prepared with the aid of this working sheet. First of all, it should be noted that the balance sheet shows three inventories under the heading of current assets. One of these is *raw materials*, or the materials to go into the finished product. For a furniture manufacturing company, raw materials would include lumber, glue, varnish, mirrors for dressers, and cloth for upholstering such as velour, mohair, and damask. A second inventory is *goods in process*. This inventory includes the value of goods being worked upon in the plant but which are not yet completed. The value of such goods includes the value of raw materials which were issued from the storeroom to the factory, the wages of workmen which have been earned while the workmen were employed in performing the processes of manufacture on these materials, and a fair share of the expenses of the factory. The third inventory is the *finished goods inventory*. The value of the finished goods inventory, like that of the inventory of goods in process, includes the materials, the labor, and the factory expenses incurred in the manufacture of the goods which have been completely manufactured.

In addition to the three inventories just named, which are shown as current assets, there is an inventory of factory supplies. This inventory includes those things which are used in the factory but which do not go into the product of manufacture. Examples of factory supplies are waste, used in cleaning machines, oil for oiling the machines, and supplies for cleaning floors and windows. Factory supplies are not considered a current asset because they are not

intended to be sold but will finally be used and charged as expense. They are therefore entered on the balance sheet under the heading of prepaid expenses or deferred charges.

The manufacturing concern has a larger proportion of fixed assets than does the trading concern.—The inventories represent a smaller percentage of the total assets, while machinery, buildings, and land represent a greater percentage. This difference in the nature of the assets is reflected in greater charges for depreciation in the statement of income and expense.

The manufacturing concern usually finances by bonds instead of mortgage notes.—The reason the manufacturing concern usually finances by means of bonds is that the greater amount of fixed capital needed, requires the borrowing of large sums of money which cannot be obtained by the issuing of a single mortgage note. In the illustration, however, it will be found that the Spring Manufacturing Company, being a small concern, was able to raise by a mortgage note the small amount of capital it needed. In other respects, it will be found that the balance sheet of the manufacturing company is not much different from that of a large retail store or other trading concern.

The statement of income and expense of a manufacturing concern differs from that of a trading concern mainly in the method of determining the cost of goods sold.—The sales section and the selling and administrative expense sections of the manufacturing statement of income and expense do not differ from the corresponding sections of the income and expense statement of the trading concern, but the cost of goods sold section is very different. First of all, it should be noted that manufacturing costs include three elements: (1) raw materials used in manufacture, (2) the wages of laborers who are employed in working on the materials during the

process of manufacture, and (3) the expenses of running the plant itself. These three elements of manufacturing cost are usually spoken of as materials, direct labor, and manufacturing expense. Materials must be distinguished from manufacturing supplies, as was pointed out in a preceding paragraph. The word "direct," as applied to labor, means that the workers are employed in working on the raw materials and not in making repairs, cleaning floors and windows, checking in materials and supplies purchased, or doing some other kind of work besides working on the material. Direct labor is to be contrasted with that of the foreman, or factory superintendent, or night watchman, or storekeeper, or other employee who is necessary to the plant but who does not work on the material itself. The labor of such persons is called *indirect labor*. Manufacturing expense includes all costs of running the factory other than materials and direct labor, such as indirect labor, supplies, fire insurance, taxes on the factory, equipment and inventories, repairs, depreciation on factory building, machinery, and other factory equipment, tools broken or lost, heat, light, and power. All of these outlays are made as a part of the cost of production and must be considered in determining the cost of goods sold. It would be an understatement of costs to include only purchases and beginning and ending inventory of raw materials, for the result of this calculation would be merely the cost of the raw materials used in manufacture.

The cost of goods manufactured is the cost of goods completely manufactured and transferred from the factory to the finished goods warehouse.—To determine the cost of goods manufactured, it is necessary to separate the costs applicable to goods actually finished from the increase or decrease in the value of the inventory of goods in process.

To add the value of materials consumed, the cost of direct labor, and the manufacturing expense, is merely to determine the values which went into all the goods which were in the factory during the accounting period. It is obvious, therefore, that if materials have been issued from the store-room to the factory, and workmen have been employed to work on the materials, and manufacturing expenses have been incurred in connection with the processes of manufacture, but the goods have not been completed but are still in process of manufacture, such costs are not a part of the cost of goods manufactured.

If the inventory of goods in process has decreased during the period, this means that all of the manufacturing costs incurred during the period are represented by goods which have been completed, and in addition some of the goods in process at the beginning of the period have been completed and added to the finished stock. The amount of the decrease in the inventory of goods in process must, therefore, be added to the manufacturing costs to determine the cost of goods manufactured. If the value of the goods in process has increased during the period, the amount of this increase must be deducted from the manufacturing costs incurred to determine the cost of goods manufactured.

The cost of goods manufactured is not the same as the cost of goods sold, for the goods manufactured may still be in the warehouse and, therefore, unsold. It is necessary to make allowance for an increase or decrease in the inventory of finished goods in exactly the same way that allowance is made for an increase or decrease in the inventory of goods in process. An increase in the value of the finished goods inventory is subtracted from the cost of goods manufactured to determine the cost of goods sold, while a decrease is added.

The method of preparing the reports will now be illustrated.—Having noted the principal details in which the balance sheet and the statement of income and expense for a manufacturing concern differ from the statements of a trading concern, we may turn to the method of assembling the data for the preparation of the reports. To illustrate the procedure, the working sheet of the Spring Manufacturing Company on pages 310 and 311 will be used. It is the regular eight-column working sheet with the beforeclosing trial balance entered in the first two money columns. The additional facts for which adjustment must be made before the reports can be prepared are as follows:

Ending Inventories: raw materials \$2,500; work in process \$1,800; finished goods \$4,200.

Estimated losses on bad debts \$145.

Insurance expired \$100.

Depreciation on building, estimated \$120.

Depreciation on furniture and fixtures, estimated \$25.

Depreciation on machinery \$500.

Inventory of tools \$675.

Factory supplies on hand \$80.

Interest accrued on notes payable and mortgage payable \$38.

Accrued salaries: sales salaries \$75; office salaries \$85.

Accrued wages: direct labor \$530; indirect labor \$270.

It will not be necessary to explain all of the adjustments, for most of them are similar to those explained in Chapter XVII. The student can readily analyze the entries by reference to the adjustments columns. Only the method of recording the ending inventories of merchandise and of tools will be explained. The ending inventories of raw materials, goods in process, and finished goods, are entered in the adjustment column as a credit to the account which shows the amount of the beginning inventory in each case. The debit is entered on a new line on the working sheet after the trial

THE SPRING MANUFACTURING COMPANY

WORKING SHEET

DECEMBER 31, 1929

Name of Account	Trial Balance		Adjustments		Expense and Income		Balance Sheet	
	Debit	Credit	Debit	Credit	Debit	Credit	Debit	Credit
Cash	1,000.00						1,000.00	
Accounts Receivable	4,000.00						4,000.00	
Reserve for Losses on Bad Debts		200.00						345.00
Finished Goods Inventory, Jan. 1	3,500.00			145.00				
Work in Process Inventory, Jan. 1	2,000.00			4,200.00				
Raw Material Inventory, Jan. 1	1,800.00			1,800.00				
Prepaid Insurance	200.00			2,500.00				
Office Furniture and Fixtures	500.00			100.00			100.00	
Reserve for Depreciation Furniture and Fixtures		50.00					500.00	
Tools	800.00			25.00			675.00	75.00
Machinery	5,000.00			125.00			5,000.00	
Reserve for Depreciation on Machinery		900.00						1,400.00
Buildings	6,000.00			500.00			6,000.00	
Reserve for Depreciation on Buildings		1,000.00						1,120.00
Land	3,000.00			120.00			3,000.00	
Accounts Payable		800.00						800.00
Notes Payable		1,000.00						1,000.00
Mortgages Payable		4,000.00						4,000.00
Capital Stock		10,000.00						10,000.00
Surplus		2,935.00						2,935.00
Sales		23,000.00				29,000.00		
Sales Returns	25.00				25.00			
Sales Allowances	75.00				75.00			
Purchases Raw Material	7,500.00				7,500.00			
Freight in	180.00				180.00			
Direct Labor	5,300.00				5,830.00			
Indirect Labor	2,000.00				2,270.00			
Repairs to Building	250.00				250.00			
Heat, Light, and Power	1,100.00				1,100.00			
Factory Supplies	400.00				1,320.00			
Sales Salaries	1,500.00				1,575.00			
Sales Office Expense	1,000.00				1,000.00			
Advertising	400.00				400.00			
Office Salaries	1,800.00				1,885.00			
				80.00				
				75.00				
				85.00				

balance accounts, a separate line being used for each ending inventory. The debit is carried over to the balance sheet section to indicate that the amount of the ending inventory is an asset and is to be shown on the balance sheet. The line on which the credit is entered contains in each case a debit in the trial balance section and a credit in the adjustment section. If the debit exceeds the credit, that is, if the beginning inventory exceeds the ending inventory, the difference is entered on the debit side of the expense and income section. If the reverse is true, the difference is entered on the credit side. The reason for this is that if the beginning inventory is the larger, the excess is to be added in the proper place in the statement of income and expense; while if the beginning inventory is the smaller, the difference is to be subtracted.

The list of adjustments shows the ending inventory of tools to be \$675. It is customary to take an inventory of tools at the end of each accounting period and to record the amount of this inventory instead of maintaining a reserve for depreciation on tools as is done with the other fixed assets. It would be difficult to keep records of depreciation on tools, because there would be so many tools to keep records for, and because tools may be lost or broken during the year. The Tools account of the Spring Manufacturing Company shows a debit balance of \$800 in the trial balance, and a comparison of this debit balance with the amount of the inventory of tools on hand, \$675, indicates that the value of tools used, lost, or broken is \$125. An adjusting entry is therefore made debiting Tools Used and crediting Tools to the amount of \$125.

The form of the balance sheet and the statement of income and expense of the Spring Manufacturing Company should be carefully studied at this time.

THE SPRING MANUFACTURING COMPANY

BALANCE SHEET, DECEMBER 31, 1929

Assets

Current Assets			
Cash		\$1,000.00	
Accounts Receivable	\$4,000.00		
Less: Reserve for Bad Debts	<u>345.00</u>	3,655.00	
Inventories			
Finished Goods	4,200.00		
Work in Process	1,800.00		
Raw Material	<u>2,500.00</u>	8,500.00	
Total Current Assets			\$13,155.00
Deferred Charges			
Prepaid Insurance		100.00	
Factory Supplies		<u>80.00</u>	
Total Deferred Charges			180.00
Fixed Assets			
Office Furniture and Fixtures	\$500.00		
Less: Reserve for Depreciation	<u>75.00</u>	425.00	
Tools		675.00	
Machinery	5,000.00		
Less: Reserve for Depreciation	<u>1,400.00</u>	3,600.00	
Building	6,000.00		
Less: Reserve for Depreciation	<u>1,120.00</u>	4,880.00	
Land		3,000.00	
Total Fixed Assets			<u>12,580.00</u>
Total Assets			<u>\$25,915.00</u>

Liabilities

Current Liabilities			
Accounts Payable	\$800.00		
Notes Payable	1,000.00		
Accrued Wages	800.00		
Accrued Salaries	160.00		
Interest Accrued	<u>38.00</u>		
Total Current Liabilities		2,798.00	
Fixed Liabilities			
Mortgage Payable		<u>4,000.00</u>	
Total Liabilities			6,798.00

Proprietorship

Capital Stock	\$10,000.00		
Surplus	<u>9,117.00</u>		
Total Proprietorship			19,117.00
Total Liabilities and Proprietorship			<u>\$25,915.00</u>

THE SPRING MANUFACTURING COMPANY

STATEMENT OF INCOME AND EXPENSE FOR YEAR ENDING DECEMBER 31,

	1929	
Gross Sales		\$29,000.00
Less: Sales Allowances	\$25.00	
Sales Returns	75.00	100.00
Net Sales		\$28,900.00
Cost of Goods Sold		
Purchases of Raw Materials	\$7,500.00	
Add Freight In	180.00	
	7,680.00	
Deduct Increase in Inventory Raw Material	700.00	
Raw Material Consumed		6,980.00
Direct Labor		5,830.00
Manufacturing Expenses		
Indirect Labor	\$2,270.00	
Repairs to Building	250.00	
Heat, Light, and Power	1,100.00	
Factory Supplies	320.00	
Depreciation on Building	120.00	
Depreciation on Machinery	500.00	
Insurance Expired	100.00	
Tools Used	125.00	
Total Manufacturing Expense		4,785.00
Total Manufacturing Cost		17,595.00
Add: Decrease in Inv. of Work in Process		200.00
Cost of Goods Manufactured		17,795.00
Deduct: Increase in Inv. of Finished Goods		700.00
Cost of Goods Sold		17,095.00
Gross Profit		\$11,805.00
Selling Expenses		
Sales Salaries	\$1,575.00	
Sales Office Expense	1,000.00	
Advertising	400.00	
Total Selling Expenses		2,975.00
Selling Profit		\$8,830.00

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Administrative Expenses		
Office Salaries	\$1,885.00	
Loss on Bad Debts	145.00	
Depreciation on Furniture and Fixtures	25.00	
Total Administrative Expenses		2,055.00
Net Profit		\$6,775.00
Other Income		
Interest Income	10.00	
Purchases Discounts	135.00	
Total Other Income		145.00
		\$6,920.00
Nonoperating Expenses		
Interest Expense	308.00	
Sales Discounts	430.00	
Total Nonoperating Expenses		738.00
Net Income		<u>\$6,182.00</u>

A condensed statement of income and expense is frequently prepared for the manufacturing concern.—The statement of income and expense of the manufacturing concern is so long that it frequently would extend over more than one type-written page unless it were condensed. This is not true of the statement of the Spring Manufacturing Company because this statement does not contain many items of selling and administrative expense. But if the statement does cover more than one page, it becomes difficult to keep in mind the various items, and to make the necessary comparisons of the different parts of the statement, such as a comparison of the amount of the gross or net profit with the amount of the sales. In such cases, a condensed statement, supported by schedules, is prepared. A condensed statement of the Spring Manufacturing Company would be prepared in the following form:

THE SPRING MANUFACTURING COMPANY

CONDENSED STATEMENT OF INCOME AND EXPENSE FOR THE YEAR ENDING
DECEMBER 31, 1929

Gross Sales		\$29,000.00
Less: Sales Allowances	\$25.00	
Sales Returns	75.00	100.00
Net Sales		28,900.00
Cost of Goods Sold (Schedule No. 1)		17,095.00
Gross Profit		11,805.00
Selling Expenses (Schedule No. 2)		2,975.00
Selling Profit		8,830.00
Administrative Expenses (Schedule No. 3)		2,055.00
Net Profit		6,775.00
Other Income (Schedule No. 4)		145.00
Gross Income		6,920.00
Nonoperating Expenses (Schedule No. 5)		738.00
Net Income		\$6,182.00

The supporting schedules would be attached to the statement and the business executive would thereby be enabled to see the results of the year in summarized form and, at the same time, to study the details by reference to the schedules. The schedules would show exactly the same items that are shown in the more detailed statement illustrated on page 314, and the information would be arranged in the same way. It is not considered necessary, therefore, to repeat the information here. The heading for the schedule would be arranged as follows:

Expense and Income
Schedule No. 1

THE SPRING MANUFACTURING COMPANY

SCHEDULE OF COST OF GOODS SOLD FOR YEAR ENDING DECEMBER 31,
1929

Purchases of Raw Materials, Etc.	\$7,500.00
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The statements of companies other than manufacturing companies may also be arranged in condensed form with supporting schedules, but usually this is unnecessary. Supporting schedules are also sometimes prepared for certain items on the balance sheet, such as accounts receivable, notes receivable, investments, deferred charges, notes payable, etc.

Expense and income accounts of the manufacturing company are closed through a Manufacturing Account and a Trading Account in addition to the Expense and Income Account.—It would be possible to close all the manufacturing expense and income accounts through a single Expense and Income account in a manner similar to that which has been illustrated for the trading concern. The difficulty with the use of a single account is that the books show only the net income and not the cost of goods manufactured, or the gross profit, or selling profit, or net profit. Even with the additional closing accounts, not all of this information can be shown, but much of it can be. The Manufacturing Account is used to summarize all of those items that have to do with the cost of goods manufactured, which includes the cost of raw materials consumed, direct labor, manufacturing expenses, and the beginning inventory of work in process. All these are closed into the Manufacturing Account as debits. The ending inventory of goods in process is shown in the Manufacturing Account as a credit. The balance of the Manufacturing Account, after these debits and credits have been made, represents the cost of goods manufactured. The Manufacturing Account is closed into the Trading Account by an entry debiting Trading Account and crediting Manufacturing Account.

The Trading Account is used as a summary of those items of expense and income which have to do with selling. Sell-

ing expenses and the Sales Account are closed into it, also the beginning inventory of finished goods. The ending inventory of finished goods is set up as a credit to the Trading Account and a debit to the Finished Goods Inventory account. With the Net Sales and the ending inventory shown on the credit side, and the beginning inventory of finished goods, the cost of goods manufactured, and the selling expenses, shown on the debit side, the balance of the account represents selling profit. The selling profit is then transferred to Expense and Income by an entry debiting the Trading Account and crediting Expense and Income.

The Expense and Income account is used to summarize the remaining items of expense and income. In order that the net profit may be shown in the account, the Expense and Income account may be divided into two sections as illustrated on page 322. In the first section, the selling profit is shown as a credit, the offsetting debit being to the Trading Account as just explained. The administrative expense accounts are then closed by debiting Expense and Income and crediting the various expense accounts. The balance of the account now represents net profit which is brought down to the next section of the account by writing the balance of the account on the debit side, bringing down the totals, and entering the net profit on the credit side of the second section below. Nonoperating expenses and nonoperating income are next closed into the second section of the Expense and Income account and the balance of the account then represents the net income which is transferred to the Surplus account.

The entries which should be made in closing out the beginning inventories of the Spring Manufacturing Company and in setting up the ending inventories of raw material, goods in process, and finished goods are as follows:

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	December 31, 1929		
Purchases of Raw Materials		\$1,800.00	
Raw Materials Inventory			\$1,800.00
To transfer beginning inventory of raw materials to Purchases account			
	31		
Raw Materials Inventory		2,500.00	
Purchases of Raw Materials			2,500.00
To set up ending inventory of raw materials			
	31		
Manufacturing Account		2,000.00	
Work in Process Inventory			2,000.00
To close beginning inventory of goods in process to Manufacturing Account			
	31		
Work in Process Inventory		1,800.00	
Manufacturing Account			1,800.00
To set up ending inventory of goods in process			
	31		
Trading Account		3,500.00	
Finished Goods Inventory			3,500.00
To close beginning inventory to Trading Account			
	31		
Finished Goods Inventory		4,200.00	
Trading Account			4,200.00
To set up ending inventory of finished goods			

The accounts may be closed by means of compound entries.—The entries necessary to adjust the accounts of the Spring Manufacturing Company are omitted, since they involve no new principles. The closing entries are given in order to illustrate the saving of time and labor which may be accomplished by the use of compound entries, that is, entries having more than one debit or more than one credit. This method results in a considerable shortening of the closing process if the company has a number of kinds of expenses and income, which is usually the case with the manufacturing concern. The accounts of other businesses may also be closed by means of compound entries. The

compound entries made to close the accounts of the Spring Manufacturing Company follow.

December 31, 1929			
Sales	\$100.00		
Sales Allowances			\$25.00
Sales Returns			75.00
To close Sales Returns and Sales Allowances to sales account			
	31		
Sales	28,900.00		
Trading Account			28,900.00
To close Net Sales to Trading Account			
	31		
Purchases of Raw Materials	180.00		
Freight In			180.00
To close Freight In to Raw Materials Account			
	31		
Manufacturing Account	6,980.00		
Purchases of Raw Materials			6,980.00
To transfer Cost of Material Consumed to Manufacturing Account			
	31		
Manufacturing Account	5,830.00		
Direct Labor			5,830.00
To close Direct Labor to Manufacturing Account			
	31		
Manufacturing Account	4,785.00		
Indirect Labor			2,270.00
Repairs, to Building			250.00
Heat, Light, and Power			1,100.00
Factory Supplies			320.00
Depreciation on Building			120.00
Depreciation on Machinery			500.00
Insurance Expired			100.00
Tools Used			125.00
To close Manufacturing Expense Accounts to Manufacturing Account			
	31		
Trading Account	17,795.00		
Manufacturing Account			17,795.00
To close Manufacturing Account to Trading Account, balance representing cost of goods manufactured			

STATEMENTS FOR MANUFACTURING CONCERN 321

	31	2,975.00	
Trading Account			
Sales Salaries			1,575.00
Sales Office Expense			1,000.00
Advertising			400.00
To close Selling Expense Accounts to Trading Account			
	31	8,830.00	8,830.00
Trading Account			
Expense and Income			
To transfer Selling Profit to Expense and Income Account			
	31	2,055.00	
Expense and Income			
Office Salaries			1,885.00
Loss on Bad Debts			145.00
Depreciation on Furniture and Fixtures			25.00
To close Administrative Expense Accounts to Expense and Income			
	31	10.00	
Interest Income			
Purchases Discounts		135.00	
Expense and Income			145.00
To close Nonoperating Income Accounts into Expense and Income			
	31	738.00	
Expense and Income			
Interest Expense			308.00
Sales Discounts			430.00
To close Nonoperating Expense Accounts into Expense and Income			
	31	6,182.00	
Expense and Income			
Surplus			6,182.00
To close Expense and Income Account to Surplus			

After these entries have been posted, the Manufacturing Account, the Trading Account, and the Expense and Income account appear as follows:

MANUFACTURING ACCOUNT

1929				1929			
Dec. 31	Beg. Inv. Work in Process		2,000.00	Dec. 31	End. Inv. Work in Process		1,800.00
31	Raw Material Consumed		6,980.00	31	Balance to Trading		17,795.00
31	Direct Labor		5,830.00				
31	Manufacturing Expenses		4,785.00				
			<u>19,595.00</u>				<u>19,595.00</u>

TRADING ACCOUNT

1929			1929		
Dec. 31	Beg. Inv. Finished Goods	3,500.00	Dec. 31	End. Inv. Finished Goods	4,200.00
31	Cost of Goods Manufactured	17,795.00	31	Net Sales	28,900.00
31	Selling Expenses	2,975.00			
31	Selling Profit	8,830.00			
		<u>33,100.00</u>			<u>33,100.00</u>

EXPENSE AND INCOME

1929			1929		
Dec. 31	Administrative Expenses	2,055.00	Dec. 31	Selling Profit	8,830.00
31	Net Profit, Down	6,775.00			
		<u>8,830.00</u>			<u>8,830.00</u>
Dec. 31	Nonoperating Expenses	738.00	Dec. 31	Net Profit, Down	6,775.00
31	Net Income, to Surplus	6,182.00	31	Nonoperating Income	145.00
		<u>6,920.00</u>			<u>6,920.00</u>

QUESTIONS FOR DISCUSSION

1. What are the three elements of manufacturing cost?
2. Distinguish between the three inventories of the manufacturing concern.
3. Why is it necessary to allow for increase or decrease in inventories of work in process and finished goods in determining the cost of goods sold for a manufacturing concern?
4. How is the value of the inventory of goods in process determined? Finished goods? Raw materials?
5. How does the balance sheet of a manufacturing concern differ from the balance sheet of a trading concern?
6. What is the purpose of the Manufacturing Account and the Trading Account?
7. What debits and credits are made in the Manufacturing Account? In the Trading Account?

8. Explain the use of the two sections of the Expense and Income account.

9. State whether each of the following is a manufacturing expense, a selling expense, or an administrative expense.

Depreciation of factory

Depreciation on office equipment

Depreciation on delivery equipment

Wages paid night watchman at the factory

Repairs to factory

Repairs to delivery truck

Advertising

Salary of bookkeeper

Salary of factory manager

Sweeping materials used in sweeping factory floors

Waste used in oiling machines

Commission paid to salesman

Insurance on factory

Insurance on office equipment

Losses on bad debts

Taxes on factory

Freight on goods sold to customers

Stationery and postage

Telegrams sent to salesmen

Messenger service in office

Telephone rent

Power

Heat for factory

Heat for general offices

Light for factory

Light for general offices

Salaries paid to salesmen

Wages of storekeeper and receiving clerk who checks in raw materials purchased.

10. What schedules may be prepared for the balance sheet of the manufacturing concern? For the statement of expense and income?

11. How do the working sheet and accounting reports of a manufacturer differ from those of a trading company?

12. Compare the procedure for closing the books of a manufacturing company with that followed in closing those of a mercantile company.

PROBLEMS

1. The following is a list of items in the balance sheet of the Excelsior Manufacturing Company at March 31, 1930:

Notes Receivable	\$5,000.00
Land	8,000.00
Accounts Payable	10,000.00
Accounts Receivable	12,000.00
Buildings	15,000.00
Inventory of Raw Material	4,000.00
Inventory of Factory Supplies	500.00
Machinery and Equipment	20,000.00
Notes Payable	2,000.00
Cash	8,000.00
Inventory of Goods in Process	3,000.00
Inventory of Finished Goods	7,000.00
Goodwill	5,000.00
Delivery Equipment	2,000.00
Reserve for Depreciation on Building	2,000.00
Reserve for Depreciation on Machinery and Equipment	5,000.00
Reserve for Depreciation on Delivery Equip- ment	500.00
Reserve for Bad Debts	2,000.00
Mortgage Payable	18,000.00
Capital Stock	40,000.00
Surplus	10,000.00

Prepare a balance sheet, classifying assets and liabilities.

2. The following is the trial balance of the A. B. C. Company at December 31, after all adjustments have been made, except that the inventories are for January 1.

Cash	\$9,600.00
Accounts Receivable	8,900.00
Notes Receivable	9,000.00
Inventory, Finished Goods, January 1	16,000.00
Inventory, Raw Materials, January 1	5,000.00
Inventory, Goods in Process, January 1	1,640.00
Prepaid Insurance	200.00

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Interest Accrued Receivable	30.00	
Office Equipment	560.00	
Reserve for Depreciation on Office Equipment		130.00
Delivery Equipment	1,500.00	
Reserve for Depreciation on Delivery Equipment		500.00
Factory Machinery and Equipment	22,000.00	
Reserve for Depreciation on Factory Machinery		2,500.00
Buildings	22,500.00	
Reserve for Depreciation on Buildings		2,800.00
Land	3,000.00	
Accounts Payable		8,000.00
Notes Payable		2,000.00
Mortgage Payable		10,000.00
Capital Stock		30,000.00
Surplus		10,660.00
Sales		120,000.00
Purchases, Raw Material	25,000.00	
Direct Labor	18,000.00	
Indirect Labor	12,000.00	
Factory Supplies Consumed	500.00	
Insurance Expired (on Factory)	200.00	
Heat, Light and Power	1,200.00	
Property Taxes on Factory	560.00	
Depreciation on Factory and Equipment	2,670.00	
Delivery Expense	640.00	
Sales Salaries	8,000.00	
Sales Commissions	185.00	
Miscellaneous Selling Expense	4,000.00	
Administrative Salaries	10,000.00	
Miscellaneous Administrative Expense	2,500.00	
Interest Income		100.00
Purchase Discounts		300.00
Interest Expense	640.00	
Sales Discounts	965.00	
	<u>\$186,990.00</u>	<u>\$186,990.00</u>

The ending inventories are as follows:

Finished Goods	\$15,600.00
Raw Materials	7,500.00
Goods in Process	3,460.00

Required:

- (1) Balance sheet and statement of Income and Expense at December 31.
- (2) Entries to set up ending inventories.
- (3) Entries to close the accounts, using a Manufacturing account, Trading account, and two-section Expense and Income Account.

3. From the following trial balance of the King Manufacturing Company, prepare working sheet and balance sheet and statement of income and expense.

Cash	\$1,000.00	
Prepaid Insurance	160.00	
Land	3,000.00	
Machinery and Equipment	25,600.00	
Building	15,000.00	
Delivery Equipment	1,200.00	
Reserve for Depreciation		\$4,500.00
Accounts Receivable	7,000.00	
Inventory, Raw Material, January 1	3,000.00	
Inventory, Finished Goods	9,500.00	
Inventory of Goods in Process	1,800.00	
Accounts Payable		6,800.00
Notes Payable		1,000.00
Capital Stock		25,000.00
Surplus		5,180.00
Sales		160,000.00
Raw Material Purchases	40,000.00	
Factory Expense, Miscellaneous	12,600.00	
Factory Labor — Direct	35,000.00	
Heat, Light and Power	10,500.00	
Indirect Labor	9,880.00	
Selling Expense	18,500.00	
Administrative Expense	9,210.00	
Interest Expense	40.00	
Purchase Discounts		510.00
	<u>\$202,990.00</u>	<u>\$202,990.00</u>

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The ending inventories are as follows:

Raw material	\$3,650.00
Goods in Process	2,500.00
Finished goods	9,150.00

The additional information pertaining to the Company is as follows:

Insurance expired 75.00 (charge as a manufacturing expense:)	
Depreciation on Factory and Equipment	\$590.00
Depreciation on delivery equipment	240.00
Interest accrued on notes payable	15.00
Sales Salaries Accrued	175.00
Factory Wages Accrued: Direct 680., Indirect 250.	

Note: When only one reserve for depreciation account is kept, the fixed assets which are subject to depreciation are entered separately on the balance sheet and totaled and the reserve is deducted from the total.

REFERENCES FOR FURTHER STUDY

- ACCOUNTING FOR A MANUFACTURING BUSINESS: Folts and Stillman,
Interpretive Accounting, pp. 402-416
- GENERAL ACCOUNTING, MANUFACTURING ACCOUNTS: McCarty and
Amidon, *Survey Course in Accounting*, pp. 366-373

PART V

SPECIAL PROBLEMS OF THE PARTNERSHIP
AND THE CORPORATION

CHAPTER XXI

SPECIAL PROBLEMS OF THE PARTNERSHIP

PURPOSES OF THIS CHAPTER

1. To illustrate the method of opening the books of a partnership; to explain how partners' drawings of cash or merchandise are recorded
 2. To explain how the division of profits is shown in the accounts; to explain the method of accounting for the liquidation of a partnership
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The methods of collecting and recording the information in the accounting records and the procedure for preparing the reports as described in the preceding chapters are applicable to any business, whether single proprietorship, partnership, or corporation. Whatever may be the legal form of the business organization, the journals and the ledger accounts used to record assets, liabilities, expenses, and income, will vary little, though, of course, the records vary according to the size of the business and the nature of the assets owned and liabilities owed. The process of closing the accounts and preparing the accounting reports is not materially different in partnership or corporation accounts from the methods followed in the books of the single proprietorship. The principal differences in accounting for the different forms of business organization arise in connection with the accounting for proprietorship. Some of these problems have to do with the opening of the books, some with the division of profits, some with the liquidation of the business. The problems which arise in partnership accounting will now be considered.

The financial affairs of a partnership are governed by a partnership agreement.—The partnership exists by virtue of an agreement between the partners, and the financial relationship of the partners to each other is governed by this agreement. The agreement may be written or oral. The written agreement is to be preferred because it is likely to be more definite and less likely to lead to dispute. The financial points which should be covered in the partnership agreement are the following:

1. Capital investment to be made by each partner.
2. Drawing privilege allowed each partner.
3. Salary allowances to each partner, if any.
4. Method of dividing profits.
5. Period of time the partnership is to last and the method of liquidation of the partnership in case it is terminated.

Each partner is credited with the amount of his net investment, which may be in cash or other assets.—A partnership may be formed as a new enterprise by two or more partners who have not previously been engaged in business and who therefore have no assets to invest other than cash, or perhaps cash and land and buildings. In this case the entries to be made in opening the books of the partnership are as follows:

Cash	8,000.00	
R. J. King, Capital		8,000.00
To record the investment of R. J. King in the business in accordance with the terms of the partnership agreement		
Cash	4,000.00	
Land	500.00	
Building	3,500.00	
W. L. Howard, Capital		8,000.00
To record the investment of W. L. Howard in the business, land and building being valued in accordance with the terms of the partnership agreement and a sufficient amount of cash being invested to make a total of \$8,000.00		

One of the partners, however, may have been in business at the time of the formation of the partnership, the partner-

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ship being formed merely as an expansion of the old business. The former proprietor turns over the assets of his business to the partnership, and the entering member invests cash or perhaps other assets in an amount determined by agreement. When such a transaction is carried out, new accounting books are opened and the assets of the old business transferred to the partnership at the agreed value. If the old business had any liabilities, the amount of these must be deducted from the value of the assets to determine the net investment of the investor. To illustrate this procedure, let us assume that W. L. Howard had been in business for himself and is taking King in as a partner in the going business. At the time of the formation of the partnership, Howard's balance sheet was as follows:

<i>Assets</i>		<i>Liabilities and Proprietorship</i>	
Cash	500.00	Accounts Payable	800.00
Inventory	3,500.00	W. L. Howard, Capital	7,500.00
Fixtures	300.00		
Building	3,000.00		
Land	1,000.00		
	<u>8,300.00</u>		<u>8,300.00</u>

King and Howard now agree to form a partnership, but Howard contends that the land is really worth \$1,500 and that it must be so valued in forming the partnership. King agrees to this and also agrees to pay \$8,000 cash for a half interest in the partnership. The entry to record King's investment is the same as that already shown. On Howard's books, the land must be revalued in accordance with the agreement.

Land	\$500.00	
W. L. Howard, Capital		\$500.00
To record increased valuation of the land in accordance with agreement with King for formation of partnership.		

Howard now admits King to the business. His old books are closed by debiting the liability and proprietorship accounts and crediting the asset accounts. The entry is as follows:

Accounts Payable	800.00	
W. L. Howard, Capital	8,000.00	
Cash		500.00
Inventory		3,500.00
Fixtures		300.00
Building		3,000.00
Land		1,500.00

To record transfer of assets to the new partnership of King and Howard and the assumption of the liabilities of W. L. Howard by the new business.

The partnership books record the investment of W. L. Howard by this entry:

Cash	500.00	
Inventory	3,500.00	
Fixtures	300.00	
Building	3,000.00	
Land	1,500.00	
Accounts Payable		800.00
W. L. Howard, Capital		8,000.00

To record investment of W. L. Howard in the partnership, the assets being taken over at valuation agreed upon by the partners.

Drawings made by the partners are subject to the partnership agreement.—The agreement regarding the original investment of the partners would not be effective if each partner were allowed to withdraw cash or merchandise from the business in any amounts he desired. It is necessary, however, that the partners be allowed to draw something from the business in anticipation of profits, as some of the partners may have no other source of income. The partnership agreement may, therefore, provide that each partner shall be allowed to withdraw a stipulated amount each month. This may be the same for each partner, or the

amount may vary according to the ratio in which the partners share profits.

The drawings are recorded in the drawing account or personal account of the partner, and a drawing account is opened for each partner. It would be possible to charge drawings to the capital account; but if they are entered in a separate account, it is easier to determine whether the total drawings of a partner for the year are more or less than the amount which has been agreed upon. At the end of the year, the balance of the drawing account may be closed into the capital account. Before the drawing account is closed into capital, however, the share of the partner in the profits of the year may be credited to the drawing account and the net balance for the year may then be closed into capital.

A drawing of cash is entered as a debit to the drawing account of the partner and a credit to Cash. The entry to record a withdrawal of merchandise depends upon the partnership agreement. If the partners are charged at sales prices with the merchandise that they withdraw, the proper entry is a debit to the drawing account and a credit to Sales. If the partners are allowed to withdraw merchandise at cost prices, as is frequently the case, it would be incorrect to credit Sales, because sales are entered at selling prices and to credit Sales with withdrawals of merchandise at cost prices would affect the ratio of gross profit to sales. It is better to credit such withdrawals to the Purchases account. This method permits of correct determination of the cost of goods sold and also of the gross profit.

A salary allowance to a partner is entered when it is allowed, as a debit to Partners' Salaries and a credit to the drawing account.—Instead of allowing the partners to make withdrawals in anticipation of profits, it may be better to

allow each partner a salary. The credit to the drawing account of the partner indicates the amount which the partner is to be permitted to withdraw. The cash which he withdraws is debited to this account, so that the balance of the account indicates the amount withdrawn in excess of the salary allowance or the amount of salary allowance not withdrawn. The salary allowance is debited to Partners' Salaries and not to the account in which other administrative salaries are recorded. While the salaries paid to partners are shown on the statement of income and expense as an administrative expense, as previously indicated, they are set apart as a separate item rather than included with other salaries because the salary paid a partner may be in part a way of allocating the profits.

The method by which profits are to be divided must be carefully specified.—There are many ways in which profits may be divided among the partners. First, profits may be divided equally. If the partners fail to specify how they will share profits, and a dispute about the division gets into court, the law will assume that they meant to share them equally. Second, profits may be divided in some arbitrary ratio. This may be in the ratio of two to one or in any other ratio. Third, the profits may be divided in the ratio in which the partners contribute capital to the business. If this is the method used, it is necessary for the partners to specify whether the division is determined by the ratio of the capital accounts at the beginning of the year or at the end of the year, or by the ratio of the average capital for the year. This would make an important difference in the manner of dividing the profits if some of the partners invested more capital during the year or withdrew from their investments during that time. Finally, profits may be divided by allowing the partners interest on their invest-

ments at an agreed rate, and by dividing the remainder of the profits in some specified ratio.

If the partners allow themselves interest on their investments, they should specify whether average investment or investment at the beginning of the year is meant. The fairest method is to allow interest on the average investment. Average capital is computed by multiplying the investment by the number of months the investment is unchanged, adding the products thus obtained, and dividing by the number of months. To illustrate this method, assume that Adams and Swan have made investments and withdrawals as follows:

E. R. ADAMS		A. B. SWAN	
Jan. 1. Balance	\$10,000	Jan. 1. Balance	\$14,500
Mar. 1. Withdrawal	500	Feb. 1. Withdrawal	500
Apr. 1. Withdrawal	300	May 1. Withdrawal	500
June 1. Withdrawal	200	July 1. Investment	1,000
July 1. Withdrawal	500	Sept. 1. Withdrawal	500
Aug. 1. Investment	500	Nov. 1. Withdrawal	500
Sep. 1. Investment	500		

The average capital of each is computed as follows:

E. R. ADAMS		A. B. SWAN	
10,000 × 2 =	20,000	14,500 × 1 =	14,500
9,500 × 1 =	9,500	14,000 × 3 =	42,000
9,200 × 2 =	18,400	13,500 × 2 =	27,000
9,000 × 1 =	9,000	14,500 × 2 =	29,000
8,500 × 1 =	8,500	14,000 × 2 =	28,000
9,000 × 1 =	9,000	13,500 × 2 =	27,000
9,500 × 4 =	38,000		
12	112,400	12	167,500

112,400 ÷ 12 = 9,366.67 Average capital of Adams.

167,500 ÷ 12 = 13,958.33 Average capital of Swan.

The allowance made to the partners for interest on their capital accounts must be considered a division of profits and not a cost of the business, because such interest allowances do not represent cash paid out. The interest allowance is entered as a debit to Expense and Income and a credit to

the drawing accounts of the partners. The remaining profits are divided by a similar entry, debiting Expense and Income and crediting the drawing accounts of the individual partners.

If the business sustains losses instead of making profits, the losses are divided among the partners in the ratio in which they have agreed to share profits. In case they have agreed to allow themselves interest on their capital accounts and the business has a loss, the entry is made, debiting Expense and Income and crediting the drawing accounts of the partners in the same way that it would be made if the business had had a profit. This entry, of course, increases the debit balance shown in the Expense and Income account. The balance of this account, after the entry for interest has been made, is transferred to the drawing accounts of the partners in the profit and loss sharing ratio. The Expense and Income account is credited with an amount sufficient to balance it, the offsetting debit being to the drawing accounts of the partners.

The partnership may be terminated in any one of a number of ways.—The partners may specify in the partnership agreement how long the partnership is to last. If they know at the time of the formation of the partnership that its purposes will be accomplished by a certain time, they may agree that the partnership will be terminated at that time. The partnership may also be terminated by mutual agreement of the partners at any time, whether specified in the original agreement or not. The withdrawal of a partner or the admission of a new partner results in the dissolution of the old partnership and the formation of a new one. The partnership may be dissolved by the operation of law under a number of circumstances. Among these are the death, bankruptcy, or insanity of a partner, war between the countries of which the partners are citizens, and the enactment of

legislation making the business of the partnership illegal. Of course, it will be understood that the dissolution of the partnership does not necessarily mean that the business is discontinued. A new partnership may be formed among the remaining members to carry on the business. The dissolution of the partnership means merely that business is no longer conducted under the old contract between the partners. If they wish to form a new contract, they may do so. The partnership may also be dissolved by the formation of a corporation to take over the business.

Whether the partnership agreement specifies the time at which the partnership is to be dissolved or not, the agreement should specify what is to be done when the partnership is terminated. If there is no agreement, the books must be closed and the profits determined. Each partner is then credited with his share of the profits. If the old partnership has been dissolved as a result of the withdrawal of a partner, that partner must be paid the balance shown by his capital account. If no other partner is willing to buy the interest of the retiring partner, the business must be liquidated. This means that the assets must be sold and the proceeds divided among the partners.

If the partnership is dissolved as a result of the death of a partner, it may be an unfavorable time to take inventory and close the books. For instance, it might be the height of the busy season. It is better to provide in the partnership agreement that the business may be continued for a specific period until it can be liquidated with the smallest loss.

The amount to be paid to each partner when the business is liquidated is the balance shown in the capital account of each.—To illustrate the procedure to be followed in case of liquidation, let us start with the balance sheet of Smith and Brown shown below. The partners have decided to close

out their business, and this balance sheet shows the condition of the business after the books have been closed on May 15, 1930.

SMITH AND BROWN

BALANCE SHEET, MAY 15, 1930

<i>Assets</i>		<i>Liabilities</i>	
Cash	500.00	Accounts Pay- able	600.00
Accounts Receivable	2,300.00	Notes Payable	1,000.00
Inventory	3,800.00		
Building	4,000.00	Total Liabilities	1,600.00
Land	1,000.00		
		<i>Proprietorship</i>	
		F. H. Smith, Cap.	4,000.00
		G. C. Brown, Cap.	6,000.00
		Total Proprie- torship	10,000.00
	<u>11,600.00</u>		<u>11,600.00</u>

During the process of liquidation, Smith and Brown collect \$2,100 of the accounts receivable but find that the remaining \$200.00 are not collectible. The merchandise inventory is sold for \$4,000 while the land and building are sold together for \$4,500. In the partnership books, an account called Loss and Gain on Liquidation is opened to show the financial results of the liquidation. The entries are as follows:

Cash	2,100.00	
Accounts Receivable		2,100.00
Cash collected on accounts		
Loss and Gain on Liquidation	200.00	
Accounts Receivable		200.00
Accounts found to be uncollectible		
Cash	4,000.00	
Merchandise Inventory		3,800.00
Loss and Gain on Liquidation		200.00
Sale of merchandise inventory		
Cash	4,500.00	
Loss and Gain on Liquidation	500.00	
Building		4,000.00
Land		1,000.00
Sale of land and building		

The Loss and Gain on Liquidation account now shows a debit balance of \$500. This account is closed into the partners' capital accounts in the ratio in which they share profits, in this case equally. The entry is:

F. H. Smith, Capital	250.00	
G. C. Brown, Capital	250.00	
Loss and Gain on Liquidation		500.00
To close loss on liquidation into capital accounts of partners, losses being shared equally.		

At this point, the balance sheet of Smith and Brown appears as follows:

SMITH AND BROWN

BALANCE SHEET, JUNE 30, 1930

<i>Assets</i>		<i>Liabilities</i>	
Cash	11,100.00	Accounts Payable	600.00
		Notes Payable	1,000.00
		Total Liabilities	1,600.00
		<i>Proprietorship</i>	
		F. H. Smith, Capital	3,750.00
		G. C. Brown, Capital	5,750.00
		Total Proprietorship	9,500.00
	<u>11,100.00</u>	Total Liabilities and Proprietorship	<u>11,100.00</u>

Smith and Brown now pay their liabilities. The entries to record these payments are as follows:

Accounts Payable	600.00	
Cash		600.00
Payment of accounts in cash		
Notes Payable	1,000.00	
Cash		1,000.00
Payment of note to bank.		

The cash account now shows a balance of \$9,500, while the capital accounts of the partners total \$9,500 as shown in the last balance sheet. The liquidation of the business is completed by paying the remaining cash to the partners.

Students are often confused as to the ratio of dividing the cash among the partners, and frequently they make the mistake of showing the cash as being distributed equally between the partners merely because the profits and losses are divided equally. The equal division of the loss has already been shown in the entry closing the Loss and Gain on Liquidation account into the capital accounts of the partners. The capital accounts now show the amount of cash each partner should receive. Smith receives \$3,750 and Brown \$5,750. The entry to record this payment and to close the books of the partnership is:

F. H. Smith, Capital	3,750.00	
G. C. Brown, Capital	5 750.00	
Cash		9,500.00
Payment of cash to the partners according to the balances shown in their capital accounts. Liquidation of the partnership is now completed and all accounts are closed.		

The financial statements for the partnership differ slightly from the financial statements of the single proprietorship.—The balance sheet of the partnership differs from that of the single proprietorship only in the method of showing net worth. One way of showing the net worth of the partnership on the balance sheet was illustrated in Chapter III. The balance of the capital account of each partner at the close of the period must be shown, the total of the capital accounts of the various partners being the net worth of the entire business. It is desirable to indicate the way the balance of the capital account is made up. The capital at the end of the period is computed by adding to the capital at the beginning the partner's share of the profits and deducting his drawings. This information may be set up in this way:

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Proprietorship

J. W. Yates, Capital, Jan. 1	\$3,400.00	
Deduct drawings	<u>1,000.00</u>	
	2,400.00	
Share of profits for year	<u>1,387.50</u>	
Capital, December 31		\$3,787.50
H. H. McClure, Capital, Jan. 1	3,400.00	
Deduct drawings	<u>1,000.00</u>	
	2,400.00	
Share of profits for year	<u>1,387.50</u>	
Capital, December 31		<u>\$3,787.50</u>
Total Proprietorship		<u><u>\$7,575.00</u></u>

If the balance sheet would be made too complicated by the showing of the facts pertaining to the changes in proprietorship, an additional report called a statement of capital is prepared. In this case the balance sheet would show only the capital of each partner at the end of the year.

YATES AND McCLURE

STATEMENT OF CAPITAL FOR YEAR ENDING DECEMBER 31, 1929

	J. W. Yates	H. H. McClure	Together
Capital accounts, January 1	3,150.00	3,150.00	6,300.00
Additional investments during the year	<u>250.00</u>	<u>250.00</u>	<u>500.00</u>
	3,400.00	3,400.00	6,800.00
Drawings for the year	<u>1,000.00</u>	<u>1,000.00</u>	<u>2,000.00</u>
	2,400.00	2,400.00	4,800.00
Division of profits for the year	<u>1,387.50</u>	<u>1,387.50</u>	<u>2,775.00</u>
Capital account at the end of the year	<u><u>3,787.50</u></u>	<u><u>3,787.50</u></u>	<u><u>7,575.00</u></u>

The statement of income and expense for the partnership also differs only slightly from that of the single proprietorship. If the partners allow themselves salaries, the item Partners' Salaries should appear among the administrative

expenses. Interest allowed to partners on their capital accounts is not an expense of the business but a division of profits. Therefore, it should not be included as a part of nonoperating expenses but should be shown under a section placed at the end of the statement of income and expense under the heading Distribution of Income.

QUESTIONS FOR DISCUSSION

1. What are the advantages of the partnership as a form of business organization?

2. What should be included in the partnership agreement?

3. If you were forming a partnership with someone in whom you had confidence, would you insist that the partnership agreement be put in writing? Why?

4. Should the partners allow themselves drawings? Should the amount of the drawings be limited to certain amounts?

5. What is the purpose of the drawing account? Why not make the entries for drawings directly in the capital account? What transactions are entered in the drawing account?

6. Are partners' salaries an expense of the business? Does it make any difference whether they are considered an expense or a division of profits?

7. Mention several ways by which profits may be divided. Do you think that each way may be suited to some particular partnerships? How are profits divided if the partners make no agreement respecting profits?

8. Why should average capital be used as a basis for distribution of profits where profits are divided in the ratio of capital contributions?

9. Distinguish between termination of the partnership and dissolution of the business.

10. List the possible causes of the termination of a partnership.

11. How is the amount to which a partner is entitled at the termination of a partnership determined?

12. The balance sheet of Black and Green showed an increase in proprietorship of \$3,650 for the year 1929. Does this mean that the business has made profits of that amount? What are the possible causes of the increase?

13. In view of the causes of the termination of a partnership, would you expect partnerships to last for a long time?

14. Would a partnership be a good form of organization for a railway? Why?

15. What is the purpose of the statement of capital?

16. You are employed as bookkeeper for the partnership of Ross and Cook. On July 10, Ross dies. What should you do?

17. Ross and Cook had originally agreed to conduct the business for five years. As the term of the original agreement still has one year to run, Mrs. Ross insists that she is accepted to take her deceased husband's place. Does Cook have to agree? Why?

18. Can a partner withdraw from a partnership at any time he pleases?

19. What are the problems of accounting for a partnership that do not exist for a single proprietorship?

PROBLEMS

1. A. B. Cable and Carl Homan agree to form a partnership. Homan agrees to invest \$10,000 cash. Cable contributes his business which he has been operating for some time. The two partners agree that the accounts receivable amounting to \$2,480 should be taken over by the partnership but that an allowance for possible losses should be set up to the amount of \$250. Cable's stock of goods was valued at \$3,600 and his store fixtures at \$380. Cable owned the land and building but had placed a mortgage on them for \$2,000. The building was valued at \$3,000 and the land at \$1,500. Cable owed \$600 for merchandise purchased. In addition to the above assets, Cable paid in enough cash to make his net investment equal that of Homan's. Give the entries (general journal form) to open the books of the partnership.

2. Cable and Homan had agreed to allow interest at 6% on their investments at the beginning of the year, and to divide the balance of the profits in the ratio of Cable 60%, Homan 40%. At the end of the first year the expense and income account showed a credit balance of \$6,200. Give the entries to close the expense and income account. (Give separate entries for interest and the balance of the profits.)

3. During the third year, Cable and Homan lost money. At the end of the year they decide to terminate the partnership and dissolve the business. Their balance sheet at that time was as follows:

CABLE AND HOMAN

BALANCE SHEET, DECEMBER 31, 1929

<i>Assets</i>		<i>Liabilities</i>	
Cash	135.00	Accounts Payable	4,675.00
Accounts Receivable	2,560.00	Mortgage Payable	8,000.00
Merchandise Inventory	6,480.00	Total Liabilities	12,675.00
Store Fixtures	390.00	<i>Proprietorship</i>	
Building	10,500.00	A. B. Cable, Capital	6,000.00
Land	3,610.00	Carl Homan, Capital	5,000.00
		Total Proprietorship	11,000.00
		Total Liabilities and Proprietorship	23,675.00
	<u>23,675.00</u>		<u>23,675.00</u>

The inventory of merchandise was sold for \$5,000. Of the accounts receivable \$2,300 were collected, the balance being uncollectible. Store fixtures were sold for \$125. The land and building were sold together for \$12,000, of which \$8,000 went to the mortgage holder in payment of the mortgage. The accounts payable were then paid and the balance of the cash was paid to the partners. Give the entries in general journal form to record the liquidation of the partnership. Show the partners' capital accounts after all transactions have been completed.

4. Kress and Johnson agree to allow themselves 6% on their average capital and to divide the balance of the profits equally. Their investments and drawings were as follows:

R. F. JOHNSON		W. L. KRESS	
Jan. 1. Balance	8,000	Jan. 1. Balance	5,000
Mar. 1. Withdrawal	400	Feb. 1. Investment	1,000
Apr. 1. Withdrawal	500	June 1. Withdrawal	500
July 1. Investment	500	Sep. 1. Withdrawal	300
Sep. 1. Investment	500	Nov. 1. Withdrawal	50
Nov. 1. Withdrawal	600		

The profits for the year were \$4,500. Give the entries necessary to close the Expense and Income account. Show calculations for determining the average capital.

5. Prepare a statement of capital for Kress and Johnson on the basis of the data given in problem 4.

6. Farrow and Beecher entered into a partnership, Farrow investing \$20,000, and Beecher \$12,000. It was agreed that the partners would be allowed 10% interest on their original investments, the balance of the profits to be divided in the ratio of Farrow $\frac{2}{3}$, Beecher $\frac{1}{3}$. The profits for the first year were \$8,000. Give entries to close the Expense and Income account.

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7. Hunter and Spraggins enter into a partnership, each contributing \$15,000. During the first year Hunter withdraws in cash \$3,000 and Spraggins withdraws \$4,000. The profits for the year are \$7,000 which are divided equally. During the second year Hunter withdraws \$2,380 and Spraggins \$4,200. The profits for the second year are \$5,600. Give general journal entries to record these facts and show the capital accounts as they would appear at the end of the second year.

8. At the end of the second year Hunter and Spraggins agree that Hunter will be allowed an annual salary of \$3,000 and Spraggins \$2,400. Each partner is to withdraw each month the amount of his salary, which is to be debited to his drawing account. At the end of the year, the drawing account is to be credited with the salary for the year. Profits in excess of salaries are to be divided equally. The profits for the third year before salaries are paid are \$7,560. The partners withdraw salaries according to the agreement. Give entries to record the transactions.

9. Darling and Napier, partners sharing profits and losses equally, decide to liquidate. Their accounts stand as follows:

DARLING AND NAPIER

STATEMENT OF FINANCIAL CONDITION, MARCH 31, 1930

Cash	425.00	Accounts Payable	3,680.00
Accounts Receivable	900.00	Mortgage Payable	3,000.00
Building	4,000.00	Accrued Interest on Mort-	
Land	500.00	gage	90.00
Inventory	6,000.00	R. B. Darling, Capital	3,450.00
Operating Loss	980.00	J. A. Napier, Capital	2,585.00
	12,805.00		12,805.00

Of the accounts receivable, only \$750 were collected. The merchandise inventory was sold for \$5,250. The building and land brought \$4,100. Give the entries to record the sale of the assets, the payment of the liabilities, and the final liquidation of the affairs of the partnership.

REFERENCES FOR FURTHER STUDY

- DETAILS OF THE PROPRIETOR'S RELATION TO THE BUSINESS UNIT: Folts and Stillman, *Interpretive Accounting*, pp. 175-188
- PARTNERSHIPS: Woodbridge, *Elements of Accounting*, pp. 316-329
- THE SINGLE PROPRIETORSHIP, THE AGENCY, AND THE PARTNERSHIP: Marshall and Wiese, *Modern Business*, pp. 457-470

CHAPTER XXII

SPECIAL PROBLEMS OF THE CORPORATION

PURPOSES OF THIS CHAPTER

1. To explain the nature of the corporation
 2. To explain the accounts and records necessary to record corporate information
 3. To explain the method of accounting for special problems that arise in recording corporate information
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The corporation has come to be one of the most important forms of business organization. Most large businesses and a great many relatively small businesses are organized as corporations. Accounting for a corporation, like accounting for a partnership, requires a number of special accounts and records. The entries necessary to open the books of the corporation and to show the distribution of the net income are different from those used with other forms of business organization. Before the accounts and records of the corporation are discussed in detail, it will be necessary to explain the nature of the corporation itself.

The corporation may be defined as an artificial person created by law for certain designated purposes.—The corporation is a form of business organization which has been developed by statutory enactment. In other words, a corporation cannot be formed unless the legislature has authorized its existence by statute, and all the rights and duties of the corporation are determined by law. The essential thing about the corporation is that it is recognized at law as being a person, as it were, separate and distinct from

its stockholders, directors, and officers. Since the corporation has legal existence as a person, it can hold real estate in its own name and can sue and be sued. With a partnership, on the other hand, title to real estate must be held by the partners themselves, and suits must be brought in the name of one or more of the partners.

The corporation has many advantages as a form of business organization.—The advantages of the corporation as a form of business organization may best be seen by contrast with the partnership. In the partnership, each partner is responsible for the acts of all other partners in all transactions pertaining to the business. Each partner is personally liable for the debts of the partnership; so that, in case of the failure of the partnership, the creditors in satisfaction of their claims, may take even the property of the individual partners which has not been used in the business. This liability of the partner for the debts of the firm greatly increases the risk and makes it impossible for a partnership to obtain capital from many sources. The partnership is dissolved when any partner withdraws or any new partner is taken into the business, and this fact frequently results in confusion in partnership affairs.

In the corporation, however, the stockholders are not liable for all the debts of the corporation, but their liability is usually limited to the par value of the stock which they hold. When they have paid for their stock, they cannot be called upon for any additional assessments to meet the claims of creditors. This limited liability arises from the fact that the corporation is a separate person from the stockholders. A second advantage is that the corporation does not cease to exist when a stockholder dies, or when one stockholder withdraws by selling his stock, or when additional shares are sold. The life of the corporation is set

forth in its charter, which may grant life to the corporation for many years. A charter may even grant the corporation perpetual life. The continued existence of the corporation, regardless of what happens to the stockholders, is also the result of the fact that the corporation is a separate person. A third advantage is that the shares of the corporation may be readily transferred from one person to another. These three advantages make it much easier for a corporation to raise large amounts of capital for productive purposes. Of course, there are some disadvantages, such as heavier taxes and more strict governmental regulation, but the advantages outweigh the disadvantages where large sums must be obtained from investors.

The procedure to be followed in forming a corporation is prescribed by law.—While the procedure to be followed in forming a corporation varies in the different states, the first step is usually the filing of a petition with a designated official of the state in which the business is to be incorporated asking permission to incorporate. If the petition is approved, the next step usually is for the incorporators to secure payment on the subscriptions to the capital stock. Then, upon the payment of an incorporation fee, the charter is granted by the state.

The proprietorship of a corporation is vested in its stockholders.—Ownership of stock carries with it three rights which, as owners of the corporation, the stockholders are entitled to exercise. First, the stockholders have the right to a voice in directing the affairs of the corporation. This means that each stockholder has the right to attend the stockholders' meetings and to vote for directors of the corporation. At these meetings, each stockholder has one vote for each share of stock which he holds. Second, the stockholders have a right to a share of the earnings of the

corporation when payments are authorized by a vote of the board of directors as provided by law. Third, the stockholders are entitled to a share of the assets of the business when the corporation is dissolved and the assets are sold. Of course, this right is subject to the prior claims of creditors.

A corporation may issue several kinds of stock.—While, in general, the stockholders have the rights mentioned in the preceding paragraph, these rights are often qualified or restricted by the charter which gives the corporation its legal existence.

The stock of the corporation is of two general classes, *preferred* and *common*. If, as is usually the case, the preferred stock has the prior claim on dividends, the preferred stockholders must receive their payments of earnings, called *dividends*, before any payment can be made to the common stockholders. Of course, neither preferred nor common stockholders are entitled to receive dividends unless the directors authorize such payment by a formal vote. If the corporation has earnings out of which the dividends may be paid, the directors may declare a dividend; but if the directors believe that the funds ought to be kept in the business, they may refuse to declare a dividend payment.

Preference as to dividends may be "cumulative," which means that if the amount of the dividends specified on the preferred stock is not paid in any year, the back claims of the preferred stockholders must be paid in later years before the common stockholders receive any dividends. If the preferred stock is also "participating," the preferred stockholders participate with the common stockholders in any division of profits above a specified amount. If, for example, the preferred stock has a preference of 6% and is also participating, the preferred stockholders would first receive 6%, then the common stockholders would receive 6%, and

any remaining amount of dividends would be divided equally between the common and the preferred. Preferred stock is usually cumulative but not participating.

The preferred stock may also be preferred as to assets. This means that in case the corporation is dissolved and the proceeds of the sale of the assets are paid to the stockholders, liabilities having been paid first, the preferred stockholders must next be paid a certain amount, usually \$100 per share, before anything is paid to the common stockholders. The preferred stock frequently is denied the right to vote.

Common stock in almost every case has the right to vote, though in recent years a few corporations have issued voting and nonvoting common stock. Common stock is also classified as *par value stock* and *no-par value stock*. The par value stock has a nominal value assigned to it, usually \$100, though not necessarily that amount. No-par value stock represents merely a fractional ownership in the corporation without any nominal value being assigned to it. Preferred stock, according to the laws of most states, must have a par value assigned to it. In the discussion of accounting procedure in the pages which follow, it will be assumed that stock has par value, unless the contrary is specifically stated. The classes of stock may be summarized as follows:

Kinds of Stock

Preferred

- Cumulative or noncumulative
- Participating or nonparticipating
- Voting or nonvoting
- Par value or no-par value

Common

- Voting or nonvoting
- Par value or no-par value

Several accounts are peculiar to the corporate form of business organization.—The most important differences in the accounts of the corporation as contrasted with the partnership are found in the proprietorship accounts and in the fixed liability accounts. A number of accounts are usually necessary to show the proprietorship of the corporation; and, if several kinds of stock are issued, it is necessary to have separate accounts for each kind of stock. The fixed liabilities of the corporation are usually in the form of bonds rather than mortgage notes, and two accounts are usually necessary to show the facts with regard to the bond issue. In this discussion, it will be assumed that the corporation has only one kind of stock, which is common stock. If several kinds of stock are issued, the account name indicates the kind of stock, and a separate set of accounts is necessary for each.

The Capital Stock account shows the amount of stock which has been issued. When the account is first opened, notation of the amount of stock which the charter authorizes the corporation to issue is made in the heading of the account. This is important because the corporation cannot issue more stock than its charter authorizes it to issue. Since the Capital Stock account shows the par value of the stock which has been issued, the amount unissued may be determined at any time by comparing the amount authorized, as indicated in the heading of the account, with the amount which has been issued. When the balance sheet is prepared, both the amount of the authorized capital stock and the amount issued should be indicated in the proprietorship section. The facts are shown in this manner:

Capital Stock — Authorized	\$100,000.00
Less Unissued	20,000.00
Outstanding	\$80,000.00

If the stock is sold for less than par, the par value must still be shown as a credit in the Capital Stock account, and the difference between par value and the amount received for the stock is shown in a Discount on Stock account. If the stock were issued at 90, the facts would be shown in the balance sheet in this way:

Capital Stock — Authorized	\$100,000.00	
Less Unissued	<u>20,000.00</u>	
Outstanding	80,000.00	
Discount on Stock Issued	<u>8,000.00</u>	\$72,000.00

If the stock is sold for more than par, the par value is shown in the Capital Stock account and the additional amount received for the stock is shown in a Premium on Stock account. The premium is shown in the proprietorship section of the balance sheet in the same way that the discount is shown except that the premium is added instead of being subtracted. In every case, the Capital Stock account must show the par value of the stock and not the amount of cash received for it. If the stock has no par value, the Capital Stock account shows merely the number of shares issued and the amount of cash received for it. It is then unnecessary to have an account for discount or premium on stock.

The accumulated earnings of the corporation are shown in a Surplus account. In the partnership, it will be recalled, no distinction is made between the original investment of the partner and the accumulated earnings, both being entered in the capital account of the partner. In the corporation, the accumulated earnings must be kept separate because dividends can be paid only from earnings, and the original investment of the stockholders cannot be returned to them unless the corporation is to be dissolved. Therefore, when

the Expense and Income account is closed at the end of the fiscal period, the credit is carried to the Surplus account. When dividends are paid, they are debited to the Surplus account, and the balance of this account thus shows the amount available for dividends. If the business has a loss, the Surplus account may show a debit balance, in which case, the business is said to have a deficit. On the balance sheet, the deficit is deducted from the capital stock to show the net proprietorship.

The directors may wish to indicate to the stockholders that even though the business has a surplus, it is not expected that the surplus will be used for dividends. They may consider it more desirable to use the resources of the business in an extension of plant than to pay dividends. They may indicate their intentions to the stockholders by showing a part of the surplus under a separate heading such as, Reserve for Plant Extension. On the balance sheet, the proprietorship should be shown in this manner:

	<i>Proprietorship</i>	
Capital Stock — Authorized	\$100,000.00	
Less Unissued	<u>20,000.00</u>	\$80,000.00
Premium on Stock		8,000.00
Reserve for Plant Extension		10,000.00
Surplus		<u>6,000.00</u>
Total Proprietorship		\$104,000.00

The entries to be made when the books of the corporation are opened and when the accounts are closed at the end of the fiscal period will be illustrated in the paragraphs which follow.

Several entries may be necessary to open the books of the corporation.—The corporation may be formed as a new business or it may be merely the incorporation of a business formerly organized as a partnership. There are many possible variations in the financial arrangements between the

incorporators and, therefore, in the entries to be made in the accounts, and it will not be possible to illustrate all of the variations. Some of these cases, however, will be illustrated.

Organizing a new business.—The first entry to be made to open the books of the corporation is a memorandum entry in the general journal stating the name of the corporation, the state in which the business was incorporated, the authorized capitalization, and the purpose for which the business was incorporated. This entry would be in this form:

THE HOME FURNITURE COMPANY

NOVEMBER 1, 1929

The Home Furniture Company has this day received a charter from the State of Delaware authorizing it to engage in the business of manufacturing furniture, the authorized capitalization of the company being two hundred thousand dollars (\$200,000), divided into two thousand (2,000) shares of common stock of a par value of \$100 each.

The subscriptions to the stock would next be recorded by this entry:

Subscriptions to Capital Stock	75,000.00	
Capital Stock		75,000.00
To record the receipt of subscriptions to 750 shares of stock of the corporation at \$100 per share.		

This entry would be followed by a list of the subscribers and the number of shares subscribed for by each. The information is recorded in the explanation column of the general journal, the amount due from each subscriber being entered short of the money columns. When payment is received for the stock, the following entry is made in the cash receipts journal:

Cash	75,000.00	
Subscriptions to Capital Stock		75,000.00
Receipt of cash on subscriptions from the following:		

The names of the subscribers who have paid are entered in the same manner as previously indicated in connection with the subscriptions.

In some cases, the payments on subscriptions are not due all at one time but in several installments. If ten per cent of the subscription is paid in cash at the time of the subscription and the balance is payable at the call of the directors of the corporation, this entry would be made:

Cash	7,500.00	
Subscriptions to Capital Stock	67,500.00	
Capital Stock		75,000.00
Receipt of subscriptions to 750 shares of stock of the corporation at \$100 per share, 10% of the subscriptions being paid in cash and the balance subject to the call of the board of directors. The subscribers and the number of shares of stock subscribed by each are as follows:		

The names of the subscribers would be recorded as previously indicated. The balance due on the subscriptions may be made payable in more than one additional installment. When the directors issue the call for the next payment, this entry would be made:

Due from Subscribers, Call No. 1	7,500.00	
Subscriptions to Capital Stock		7,500.00
Call No. 1 by board of directors for payment of stock subscriptions, payable December 15, 1928.		

The payment of this call is entered as follows:

Cash	7,500.00	
Due from Subscribers, Call No. 1		7,500.00
Cash received in payment of Call No. 1 on capital stock subscriptions.		

The advantage of setting up a separate account for each call is that if any subscribers fail to make any particular payment, the facts will be clearly shown as to each call.

If the stock is subscribed for at a discount, say at 95 per share, the entries would be similar to those just given except

that Discount on Stock in each case would be debited for the discount. If no cash accompanied the subscription, the entry would be:

Subscriptions to Capital Stock	71,250.00	
Discount on Stock	3,750.00	
Capital Stock		75,000.00
Subscriptions to 750 shares of stock of the corporation at 95.		

If cash accompanied the subscription to the full amount due, the entry would be:

Cash	71,250.00	
Discount on Stock	3,750.00	
Capital Stock		75,000.00
Subscription to 750 shares of stock of the corporation at 95, subscriptions being paid in full.		

If the stock is subscribed for at a premium, say at 110 per share, the entry in the first case would be:

Subscriptions to Capital Stock	82,500.00	
Capital Stock		75,000.00
Premium on Stock		7,500.00
Subscription to 750 shares of stock of the corporation at 110.		

If cash accompanied the subscriptions, the entry would be the same except that Cash would be debited instead of Subscriptions to Capital Stock.

It will be observed that Capital Stock in each case has been credited as soon as the subscription was received, although the stock certificate is not issued until the stock has been paid for. This method of handling stock subscriptions in the accounts is in accordance with the facts, for a person is legally a stockholder as soon as the corporation accepts his subscription, regardless of whether he has paid for his stock or received a certificate. Some accountants prefer not to credit Capital Stock, however, until the certificate of stock has been issued. If this method is followed, the credit must be made in some temporary account, such

as an account called Subscribers. This account represents the liability of the corporation to deliver the stock certificates when payment for the stock has been received. The entries would be made in this order:

When subscriptions to the stock are received:

Subscriptions to Capital Stock	75,000.00	
Subscribers		75,000.00
Receipt of subscriptions to 750 shares of stock of the corporation at \$100 per share.		

When payment is received for the subscriptions:

Cash	75,000.00	
Subscriptions to Capital Stock		75,000.00
Payment of subscriptions in full.		

When the stock certificates are issued:

Subscribers	75,000.00	
Capital Stock		75,000.00
Issue of stock certificates to subscribers, payment in full having been received.		

Incorporating a partnership.—When a partnership or a single proprietorship is changed to a corporation, entries are made in the books as though the old business were being sold to the corporation. A new set of books is usually opened for the corporation, the opening entries being in the form of a purchase of the partnership assets. Of course, the corporation may assume or agree to pay the liabilities of the partnership. On the partnership books, the transfer of the assets to the corporation is recorded by an entry debiting the corporation and crediting the assets transferred. Some of these assets will have offsetting or valuation accounts, such as reserve for depreciation or reserve for losses on bad debts. The reserve accounts must be closed out by debits. All of the information relative to the transfer of the assets to the corporation is recorded by a compound entry debiting the corporation, debiting the various reserve accounts, and

crediting the various assets. If a new valuation for the assets has been agreed upon previous to the transfer, it is necessary first to make an entry debiting the assets on which a higher value is placed and crediting the assets on which a lower value is placed for purposes of the sale, the offsetting debit or credit being to the partners' capital accounts. In addition, a value is often placed upon the goodwill of the partnership. This is recorded by debiting goodwill and crediting the partners' capital accounts. The assumption of the liabilities of the partnership by the corporation is recorded by a debit to the liability accounts and a credit to the account of the corporation. The corporation now pays for the net value of the assets by a transfer to the partnership of the number of shares of the corporation which had been agreed upon. This transaction is recorded on the partnership books by a debit to the stock of the corporation and a credit to the account of the corporation. When the stock is issued by the partnership to the partners, an entry is made debiting the capital account of each partner for the shares received and crediting the stock account. This entry closes the accounts of the partnership.

On the new set of books opened for the corporation, an entry is made debiting the various asset accounts for the assets received and crediting the partnership. If there is a reserve for losses on doubtful accounts, as there should be, the reserve account must be credited, the credit to the partnership being the difference between the total value of the assets and the amount of the reserve. Reserves for depreciation which have been set up on the partnership books are not entered on the corporation books. The corporation debits the fixed asset accounts on its books for what it paid for them, and whatever reserve may have been accumulated on the books of the business from which the corporation

acquired them is no concern of the corporation. This plan cannot be followed in recording the accounts receivable, however. The accounts receivable must be recorded at face value because it is impossible to determine which of the accounts receivable will not be collected. The Accounts Receivable account on the books of the corporation must be debited for the face value of the accounts and a Reserve for Bad Debts must be set up. The assumption of the liabilities of the partnership is recorded in the corporation accounts by a debit to the partnership and a credit to the various liability accounts. The issue of stock to the partnership in payment for the business is recorded by a debit to the partnership and a credit to Capital Stock. This completes the opening of the books of the corporation.

To illustrate the accounting procedure in incorporating a partnership, the entries made in changing the grocery business of Allen and Ward into a corporation will be given. The partners have obtained a charter for the West Side Grocery Company which is to have an authorized capital of \$75,000, and which is to take over the assets and liabilities of the partnership. The trial balance of the partnership after the books were closed on December 31, 1928 is as follows:

ALLEN AND WARD

TRIAL BALANCE, DECEMBER 31, 1929

Cash	\$2,000.00	
Accounts Receivable	18,000.00	
Reserve for Bad Debts		\$1,000.00
Merchandise Inventory	12,000.00	
Building	10,000.00	
Reserve for Depreciation on building		2,000.00
Land	5,000.00	
Accounts Payable		6,000.00
C. E. Allen, Capital		19,000.00
John W. Ward, Capital		19,000.00
	<u>\$47,000.00</u>	<u>\$47,000.00</u>

It was agreed that the building was worth \$5,000 more than the value shown for it in the accounts, and that the land was worth an additional \$3,000. It was agreed also that the corporation should pay \$4,000 for the goodwill of the business. The corporation was to pay for the assets with its capital stock to the amount of \$50,000 par value.

The first entry to be made on the books of Allen and Ward is an entry to show the agreed values of the assets. As the partners had shared profits equally, the increase in the values of the assets should be shared equally. The entry is as follows:

Building	5,000.00	
Land	3,000.00	
Goodwill	4,000.00	
C. E. Allen, Capital		6,000.00
John W. Ward, Capital		6,000.00
To record the increase in the value of the assets in accordance with the agreement with the West Side Grocery Company to which the business is to be sold.		

The assets are now transferred to the corporation and the fact is shown by this entry:

The West Side Grocery Company	56,000.00	
Reserve for Bad Debts	1,000.00	
Reserve for Depreciation on Building	2,000.00	
Cash		2,000.00
Accounts Receivable		18,000.00
Inventory		12,000.00
Building		15,000.00
Land		8,000.00
Goodwill		4,000.00
To record the transfer of the assets of the partnership to the West Side Grocery Com- pany at the agreed valuations.		

The assumption of the liabilities of Allen and Ward by the corporation is recorded by this entry:

Accounts Payable	6,000.00	
The West Side Grocery Company		6,000.00
Liabilities assumed by the corporation.		

The corporation now delivers \$50,000 of stock to Allen and Ward in payment for the assets. The receipt of the stock is recorded by this entry:

Stock of the West Side Grocery Company	50,000.00	
The West Side Grocery Company		50,000.00
Stock received in payment for assets of the business transferred to them.		

The above entries leave only three accounts open on the books of the partnership. These are the partners' capital accounts and the account with the stock of the corporation. The stock of the corporation is now transferred to the partners and this entry is made:

C. E. Allen, Capital	25,000.00	
John W. Ward, Capital	25,000.00	
Stock of the West Side Grocery Company		50,000.00
To show the delivery of the stock to the part- ners.		

When this entry is posted, all of the accounts on the partnership books are closed.

On the books of the corporation, the first entry following the memorandum entry illustrated earlier in the chapter shows the receipt of the assets. This entry is as follows:

Cash	2,000.00	
Accounts Receivable	18,000.00	
Inventory	12,000.00	
Building	13,000.00	
Land	8,000.00	
Goodwill	4,000.00	
Reserve for Bad Debts		1,000.00
Allen and Ward, Vendors		56,000.00
To record assets transferred to the corpora- tion by Allen and Ward whose business is being taken over by the corporation.		

The assumption of the liabilities is shown by this entry:

Allen and Ward, Vendors	6,000.00	
Accounts Payable		6,000.00
Liabilities of Allen and Ward assumed by the corporation.		

The issue of the stock of the corporation to Allen and Ward is shown by this entry:

Allen and Ward, Vendors	50,000.00	
Capital Stock		50,000.00
Capital stock issued to Allen and Ward in payment for the net assets received from them.		

The books of the corporation are now opened and the incorporation of the partnership is complete. While the entries just illustrated show all of the facts, some accountants prefer to make an entry showing the partners as subscribers to the capital stock of the corporation. If this were done, the first entry on the books of the corporation after the memorandum entry would be an entry debiting Subscriptions \$50,000 and crediting Capital Stock \$50,000. The entries recording the receipt of the assets and the assumption of the liabilities would be the same as illustrated above. Instead of the last entry, as shown, however, there would be an entry crediting Subscriptions and debiting Allen and Ward, Vendors.

The Surplus account is used to show increases and decreases in the proprietorship of the corporation.—As was previously pointed out, the Capital Stock account shows the par value of the capital stock outstanding, and an additional account is required to show the increase or decrease in proprietorship from year to year. This account is the Surplus account, and at the close of each fiscal period, the Expense and Income account of the corporation is closed into Surplus. If the corporation has made profits, Expense and Income is debited and Surplus is credited. If the Corporation has lost money, the reverse entry is made, Surplus being debited and Expense and Income being credited. Dividends to stockholders can be paid only when the Surplus account shows a credit balance, that is, when the corporation has

profits which can be used for dividends. The entry to be made when the corporation declares and pays a dividend is to debit Surplus and credit Cash. In most cases, the dividend is declared with the stipulation that it will be paid at some specified later date. In such cases, it is necessary to show the dividend which has been declared as a liability, the obligation of the corporation to pay the dividend after it has been declared by the directors being the same as any other liability. The entry to record the declaration of dividends is a debit to Surplus and a credit to Dividends Payable. When the dividends are paid, Dividends Payable is debited and Cash is credited.

Sometimes the corporation may decide to keep the earnings permanently in the business instead of paying a dividend with them. This purpose may be accomplished by the declaration of a stock dividend, which is a dividend payable in the stock of the corporation. A stock dividend, like a cash dividend, can be declared and paid only in case the corporation has a surplus which can be used for this purpose. The entry to record the payment of a stock dividend is a debit to Surplus and a credit to Capital Stock. The total proprietorship of the corporation is unchanged by the payment of a dividend in stock, the only difference being that a part of the proprietorship which formerly was shown in the Surplus account is now shown in the Capital Stock account. After a stock dividend has been declared, however, the directors cannot at any time use the part of profits thus capitalized to pay a cash dividend.

If the directors wish to indicate to the stockholders that it is not their present plan to use the profits for the payment of cash dividends, they may so indicate to them by setting aside a part of the surplus in some other corporate proprietorship account, such as Reserve for Plant Extension. The

entry to do this is a debit to Surplus and a credit to Reserve for Plant Extension. This reserve account is a part of proprietorship even though set aside in this account. The reserve created by setting aside a part of proprietorship is called a proprietorship reserve. It must not be confused with the valuation reserve, such as the Reserve for Depreciation or the Reserve for Doubtful Accounts. These last named reserves are not a part of proprietorship but represent estimated decrease in the value of certain assets.

To illustrate the entries in the proprietorship accounts of the corporation, assume that the West Side Grocery Company made income of \$10,000 in the first year. The Expense and Income account would be closed by this entry:

Expense and Income	10,000	
Surplus		10,000
To close Expense and Income Account.		

If now the directors declare a dividend of 5%, this entry would be made:

Surplus	2,500	
Dividends Payable		2,500
Dividend of 5% declared by the Board of Directors payable on February 15th to holders of the common stock of record, January 15.		

The notation that the dividend is payable to stockholders of record January 15 means that the dividend is to be paid to all persons shown by the records of the corporation to have been holders of stock on that date. Since corporation stock is being bought and sold every day, it is necessary to fix a definite date to determine who is to receive the dividend. The date of record is always a date later than the date of the declaration of the dividends by the board of directors. The dividend is payable a certain number of days, usually two to four weeks after the date of record, this date also being determined by the board of directors.

This arrangement is to allow time for the preparation of the dividend checks.

After the dividend is paid, there remains in the Surplus account of the West Side Grocery Company, a balance of \$7,500. If the directors decide to begin the accumulation of a reserve to be used for the extension of the plant, they may set aside, say, \$5,000 of the Surplus by this entry:

Surplus	5,000.00	
Reserve for Plant Extension		5,000.00
Part of the Surplus reserved for the extension of the plant by resolution of the Board of Directors and not to be used for dividends.		

The proprietorship section of the balance sheet would now be as follows:

	PROPRIETORSHIP	
Capital Stock — Authorized	75,000.00	
Less Unissued	25,000.00	
Capital Stock Outstanding	50,000.00	
Reserve for Plant Extension	5,000.00	
Surplus	2,500.00	
Total Proprietorship		57,500.00

Many corporations raise some of their fixed capital by the issue of bonds.—Bonds differ from the mortgage notes which single proprietorships and partnerships use in that a number of bonds may be secured by a single mortgage. If the corporation wishes to issue 100 bonds of \$1,000 each, it is obviously impractical for the corporation to give each of the 100 purchasers of its bonds a mortgage on its property. The difficulty is overcome by giving a single mortgage for the entire amount which is the security for all of the bonds. This mortgage is drawn in favor of a financial institution, such as a trust company, which holds it for the bondholders as a group. The bonds usually have coupons attached which the bondholders can cut off and deposit at their banks.

There is a coupon for each interest payment to be made by the corporation. Thus, if the bond runs for 20 years with interest payable semi-annually, each bond will have 40 coupons, each bearing the date of one of the interest payment dates. Such a bond is known as a *coupon bond*. Sometimes the name of the holder is registered with the corporation which sends the interest checks to the holders. Such bonds are known as *registered bonds*.

Two accounts are usually required to show the facts with regard to bonds outstanding.—When bonds are issued, the Bonds account must be credited with the par value of the bonds, which is the amount which the corporation will have to pay at their maturity. Bonds are seldom issued at exactly their par value, however, the price of the bond depending upon the credit standing of the corporation and conditions in the money market at the time of the issue. If the bonds are sold for less than par, the difference is debited to an account called Discount on Bonds. If they are sold for more than par, the difference is credited to an account called Premium on Bonds. These accounts can best be explained in connection with a concrete case.

A corporation issued 500 bonds of a par value of \$1,000 each. These bonds bore interest at 6%, the interest being payable semi-annually. The term of the bonds was ten years, that is, the bonds were to mature ten years after the date of issue. The price of the bonds was 95, which means that each \$1,000 bond was sold for \$950. The entry to be made when the bonds are sold is as follows:

Cash	475,000.00	
Discount on Bonds	25,000.00	
Bonds		500,000.00
Sale of an issue of 10 year 6% bonds at 95.		

The reason the corporation could not sell the bonds at par was that the rate of interest stated in the bonds, 6%, was

not as high as the conditions of the money market and the financial condition of the corporation required. The purchasers were willing to buy a bond of that kind only at a concession in the price which would justify the lower nominal rate of interest stated in the bond itself. Thus the lower rate of interest is compensated for by the fact that the corporation received only \$950 for each bond when the bonds were sold but must pay an additional \$50, or \$1,000 in all, on each \$1,000 bond, ten years hence when the bond issue comes due. It would be improper for the corporation to consider that the additional \$50 to be paid on each bond at maturity is an expense of the year when the bond matures. On the contrary, the corporation should distribute the \$25,000 discount as an expense over the entire life of the bonds. This means that each interest period should bear as a cost, not merely the \$15,000 cash payment of interest for the six months, but also its fractional share of the additional \$25,000 to be paid the bondholders at the maturity of the bonds. Since there are 20 interest payments, each period should bear as its share of the discount $\frac{1}{20}$ of the \$25,000. The entry to be made when interest is paid on the bonds is:

Interest Expense	\$16,250.00	
Cash		\$15,000.00
Discount on Bonds		1,250.00
To record semiannual payment of interest on bonds and to charge off proportional share of discount on bonds.		

It is obvious that since this entry writes off the $\frac{1}{20}$ of the discount on bonds, the interest charge is increased by a like amount. The amount debited to Discount on Bonds when the bonds were sold is thus a deferred charge and is shown on the balance sheet under the heading of deferred charges or prepaid expense. Of course, the balance in the

discount account gradually decreases during the life of the bonds, and is entirely written off by the time the bonds mature.

Premium on bonds is the reverse of discount on bonds. Bonds which can be sold at a premium bear a higher stated rate of interest than conditions in the money market require. If, for example, the bonds just referred to had carried coupons with an interest rate of 7%, the bonds might have been sold at 105, or \$525,000 for the entire issue. The entry to record the issue of the bonds would be:

Cash	\$525,000.00	
Bonds Payable		\$500,000.00
Premium on Bonds		25,000.00
Sale of an issue of 10-year 7% bonds at 105.		

In this case, the money payment made by the corporation to the bondholders each year is more than the actual interest charges on the money borrowed, but the corporation is compensated for the larger cash payments to the bondholders by the fact that when the bonds mature it will have to pay only \$500,000 whereas it received \$525,000 for the bonds. The corporation has thus paid to the bondholders not merely the annual interest charges but also \$25,000 of the amount borrowed. The true condition is recorded in the accounts by charging only a part of the cash payments as expense and taking credit for the repayment of a proportional part of the \$25,000. The proper amount of the repayment at each interest date is $\frac{1}{20}$ of \$25,000 or \$1,250. The entry at each interest date would be:

Interest Expense	\$16,250.00	
Premium on Bonds	1,250.00	
Cash		\$17,500.00
To record semiannual payment of interest on bonds and to charge off a proportional share of the premium on bonds.		

At the time when the bonds are sold, the total amount borrowed may be determined by adding the par value of the bonds and the premium on bonds. The account for Premium on Bonds may, therefore, be properly considered a liability account. It is not always so considered, however, since the premium is not to be paid to the bondholders when the bonds mature. More frequently the premium on bonds is considered a deferred credit because the writing off of a part of the premium each time interest is paid reduces the charge to interest expense by a like amount. In any case, the balance of the account with Premium on Bonds is shown on the credit side of the balance sheet along with the liabilities.

Special books and records are necessary for the corporation.—A number of books and records not used by the single proprietorship or the partnership are needed by the corporation. The more important of these must be described.

The *minute book*, which is kept by the secretary of the corporation, is a record of the proceedings of the meetings of the stockholders and of the board of directors. It contains the details of all meetings including the date and place of meeting, the name of the presiding officer, the amount of stock represented in the case of stockholders' meetings or the names of the directors in attendance in the case of directors' meetings, and a record of the business transacted. The minute book is not a part of the accounting records, but it contains much information which finds its way into the accounts. The minutes of the meetings of the stockholders, for example, contain information with regard to directors elected, and applications for changes in the charter including increases in the authorized capital stock. The minutes of meetings of the board of directors contain information regarding dividends declared, sale of

stock and bonds, elections and salary of officers of the corporation, contracts for purchase or sale of land, buildings, and machinery, other contracts of the corporation, and information about pending lawsuits. The accountant must record in the accounting records any of this information which affects the financial condition of the corporation, and he must make sure that the wishes of the board of directors have been carried out in every respect.

The *subscription book* contains a record of the subscribers and the number of shares subscribed by each. When the stock salesmen receive subscriptions to the stock of the corporation, they enter the name and address of each subscriber, together with the date and number of shares subscribed, on a sheet of paper called a subscription list. These lists are placed in a book called the subscription book.

SUBSCRIPTION LIST

We, the undersigned, hereby subscribe for and agree to pay for the number of shares of the common stock of the Spring Manufacturing Company set opposite our names, at the price of \$100 per share. It is understood that one fourth of the price of this stock is to accompany the subscription and the balance is subject to call on the vote of a majority of the Board of Directors of the Company.

Date	Name of Subscriber	Address	Number of Shares	Amount
1930				
March 3	Andrew Abernathy	St. Louis, Mo.	10	1,000
3	B. F. Abernathy	St. Louis, Mo.	50	5,000
3	William Smith	St. Louis, Mo.	100	10,000
3	S. L. Leeper	Piedmont, Mo.	100	10,000

The *subscribers' ledger* contains an account with each subscriber, showing the amount due for stock subscribed for. When subscriptions are received, the general ledger account called Subscriptions to Capital Stock is debited with the

entire amount due from all subscribers, as previously explained, and the accounts of the individual subscribers are debited with the amounts due from them individually. The sum of the balances due from subscribers as shown by the balances in the Subscribers' ledger agrees with the balance of the Subscriptions to Capital Stock account. When payment on the subscriptions to capital stock are received, Cash is debited in the general ledger and Subscriptions to Capital Stock is credited. In addition, the accounts of the individual subscribers in the subscribers' ledger are credited. The relationship of the Subscriptions to Capital Stock account to the subscribers' ledger is thus the same as the relationship of the Accounts Receivable account to the customers' ledger.

The *stock certificate book* contains the blank stock certificates which are filled out and given to the stockholders when payment for the stock is received. Each certificate has a stub, similar to the stubs of the ordinary check book, on which is recorded the necessary information with regard to the issue of the stock. The stub shows the date, the name of the subscriber, the number of the certificate issued to him, and the number of shares for which the certificate was filled out. When a stockholder sells or transfers a part of his stock to some one else, he surrenders his old stock certificate which is cancelled and pinned to the stub. New certificates are then made out as designated by the stockholder. The number of shares outstanding can thus be determined from the stock certificate book.

The *stock ledger* shows the number of shares of stock held by each subscriber. When the stock is issued, the account of the stockholder in the stock ledger is credited with the number of shares which he receives. If the stockholder buys more shares, his account is credited with the addi-

tional number of shares. The stock ledger thus shows the total number of shares owned by each stockholder even though they are represented by two or more stock certificates. If the stockholder sells or otherwise transfers some of his shares, his account in the stock ledger is debited with the number of shares transferred. The record in the stock ledger is in terms of the number of shares bought or transferred and not in terms of par value or price at which the stock is bought or sold. The information contained in the stock ledger is necessary in preparing dividend checks to be mailed to stockholders and also in determining the number of shares to be voted by each stockholder at the stockholders' meetings.

The account with the stockholder is not opened in the stock ledger until the stockholder has paid for his stock, and a stock certificate has been issued to him. This ledger thus shows the total of the stock of the corporation which is outstanding; and after all stockholders have paid for their subscriptions, the total of the stock outstanding as shown by the stock ledger will agree with the total outstanding as shown by the Capital Stock account. Before the stock

ANDREW ABERNATHY, 3628 GRAND AVE., ST. LOUIS, MO.

Date of Issue of Certificate	Number of Cer- tificates Issued	From whom obtained or To whom Transferred	Number of Cer- tificates Cancelled	Shares Trans- ferred	Shares Re- ceived	Credit Bal- ance
1930						
March 10	1	Original Issue			10	10
15	8	B. F. Abernathy	2		4	14
May 5	18	S. L. Leeper	8	2		12

FORM OF STOCK LEDGER

has been paid for by subscribers, the two records will not agree, for Capital Stock is credited as soon as the subscription is received, while the account is not opened in the stock

ledger until the stock certificate is issued. It is understood that the stock ledger does not show values in dollars but only in the number of shares, while the Capital Stock account shows in dollars the par value of the stock which has been subscribed or issued. The form of the stock ledger is shown on page 374.

The *stock transfer book* is a record of the transfers of stock from one stockholder to another. No record is made in any journal when one stockholder sells stock to another because the general ledger accounts of the corporation are not affected by such a transaction. The corporation receives no money, and the total number of shares of stock outstanding is unchanged. The corporation records the transaction by deducting the number of shares transferred from the balance of one stockholder in the stock ledger and by adding this number to the balance of another. In order that there may be a complete record of such transfers, however, the corporation keeps a stock transfer book. Such a book has the following form.

THE SPRING MANUFACTURING COMPANY

Date	Number of Certificates issued	Number of Shares	To Whom Issued	By Whom Surrendered	Number of Certificates Cancelled	Number of Shares
1929 March 15 15	48 49	12 48	Andrew Grant A. B. Jones	B. F. Abernathy H. C. Roth	25 20	12 48

QUESTIONS FOR DISCUSSION

1. List the more important accounting problems which are peculiar to the corporation.
2. What accounts and records, peculiar to the corporation, are necessary because of its special problems?
3. In general, what entries should be made in closing the books of a partnership? How do the entries terminating a partnership differ from those transferring the assets and liabilities to a corporation?

4. "The corporate form of a business organization has arisen to meet the needs of the time." Explain and give examples indicating the truth of this assertion.

5. What kind of entry does the accountant use to show that the state has given the corporation permission to issue a certain amount of capital stock? What entries are made when the stock has been subscribed to? When sold?

6. How is the declaration and payment of dividends recorded?

7. "The corporate form of organization performs a great service for the small investor." If so, how?

8. Assume that \$50,000 of common stock of the corporation is sold at par. Make entries to record this on the books. What entries should be made if the stock were sold below par? Above par?

9. The balance sheet of the Dalton Manufacturing Company appears as follows:

THE DALTON MANUFACTURING COMPANY

BALANCE SHEET, DECEMBER 31, 1929

<i>Assets</i>		<i>Liabilities</i>	
Current Assets	100,000	Current Liabilities	40,000
Fixed Assets	150,000	Fixed Liabilities	60,000
		Capital Stock	150,000
	<u>250,000</u>		<u>250,000</u>

The corporation is forced into the hands of a receiver. The total assets realize only \$75,000. One half of the Capital Stock is owned by Richard Dalton. What is his liability to creditors? What would have been Dalton's liability if the business had been organized as a partnership?

10. What is the purpose of the discount on stock on account? How does it differ from the discount on bonds account?

11. Explain the entries made when bonds are sold at a premium.

12. Give the entries made when interest on bonds is paid and explain the nature of the entries.

13. What is a share of stock? How does it differ from a bond?

14. Why does the corporation issue more than one kind of stock?

15. What is the purpose of no-par stock?

16. What is the purpose of the surplus account? Why cannot the expense and income account be closed into the Capital Stock account?

17. What is a stock dividend? Why are stock dividends declared?

PROBLEMS

1. C. A. Walsh, T. M. Anderson, R. A. Chapin and J. E. Jones receive a charter authorizing them to form a corporation for the purchase and sale of washing machines. There are to be 1,000 shares of Capital Stock at a par value of \$100. Each of the incorporators has subscribed and paid for 200 shares. Make the journal entries recording the information.

2. P. M. Dorr and B. A. Cornell, partners, desire to form, with M. E. Fowler, a corporation under the name of The National Mercantile Company. The partners will transfer their assets and liabilities, as shown by the following balance sheet, to the corporation:

DORR AND CORNELL

BALANCE SHEET, DECEMBER 31, 1929

<i>Assets</i>		<i>Liabilities</i>	
Cash	2,000	Accounts Payable	4,000
Accounts Receivable	10,000	Notes Payable	6,000
Notes Receivable	4,000	Accruals	2,000
Investments	4,000	Mortgages Payable	32,000
Merchandise Inventory	30,000	Total Liabilities	44,000
Office Equipment	10,000	<i>Proprietorship</i>	
Delivery Equipment	4,000	P. M. Dorr, Capital	36,000
Land and Buildings	50,000	B. A. Cornell, Capital	36,000
Deferred Charges	2,000	Total Proprietorship	72,000
Total Assets	116,000	Total Proprietorship and Liabilities	116,000

M. E. Fowler will contribute land and buildings valued at \$30,000, office equipment valued at \$1,000 and delivery equipment value at \$5,000. The total capital stock which is all common, is \$120,000. The remaining stock has been subscribed and paid for in cash.

Required:

- (1) Make journal entries closing the books of Dorr and Cornell.
- (2) Make journal entries opening the books of The National Mercantile Company.

3. Henry B. Cooper has been conducting a grocery business, but he decides to incorporate under the name of The Henry B. Cooper Company with capital stock of \$50,000. 500 shares at a par value of \$100. He receives subscriptions as follows: Henry B. Cooper, 340 shares;

A. Wright, 80 shares; H. F. Coulter, 40 shares; R. B. Parker, 20 shares; T. E. Hilton, 20 shares. Cooper pays for his stock with the net assets of his business as shown by the following balance sheet:

HENRY B. COOPER

BALANCE SHEET, DECEMBER 31, 1929

<i>Assets</i>		<i>Liabilities</i>	
Cash	30,000	Accounts Payable	34,000
Accounts Receivable	24,000	Notes Payable	28,000
Notes Receivable	4,000		
Merchandise Inventory	22,000	Total Liabilities	62,000
Furniture and Fixtures	4,000		
Buildings	4,000		
Land	8,000	<i>Proprietorship</i>	
		Henry B. Cooper, Capital	34,000
	<u>96,000</u>		<u>96,000</u>

(1) Make the journal entries to close the books of Henry B. Cooper.

(2) Make the journal entries to open the books of The Henry B. Cooper Company.

4. Assume the necessary facts, and make balance sheets for the following: William M. Day, retail druggist. William M. Day and Alfred A. Powell, partners, in the same business. Day and Powell Drug Company.

5. Murdock, Roberts, and Hanson apply for and receive a charter from the State of Delaware for a corporation to manufacture electric appliances. The authorized capital stock is 100,000 shares of a par value of \$50 per share. Murdock and Roberts take 10,000 shares each and Hanson 30,000. The balance is reserved to be sold as the corporation needs additional capital. Payment is made for the stock and the certificates are issued. Journalize the transactions necessary to open the books of the corporation and prepare a balance sheet.

6. The Union Stove Company is organized under the laws of the state of New Jersey with the following authorized capital: 15,000 shares of common stock, par value \$50.; 2,000 shares of first preferred stock, par value \$100; 1,000 shares of second preferred stock, par value, \$100; all of the common stock and one half of the first preferred and one half of the second preferred are sold and payment is received. Prepare journal entries to open the books of the corporation and submit a balance sheet.

SPECIAL PROBLEMS OF THE CORPORATION 379

7. Give journal entries to record the following transactions on the books of the American Shoe Corporation:

- (1) The profit for the year is \$160,000.
- (2) The directors declare a dividend of 6% on the preferred stock of \$500,000 par value and 10% on the common stock of \$500,000 par value.
- (3) The dividends are paid in cash.
- (4) The directors declare and pay a stock dividend of 40% on the common stock.
- (5) A reserve for extension of plant to the amount of \$20,000 is set aside out of surplus.
- (6) On April 15, \$50,000 additional stock of the corporation is subscribed for at \$150 per share. A deposit of 20% of the purchase price accompanied each subscription. On May 15, one half of the balance due on the stock was paid in cash, and on June 15, the final installment was received and the stock certificates were issued.

REFERENCES FOR FURTHER STUDY

- THE PROPRIETOR'S RELATIONSHIP TO THE BUSINESS UNIT — THE CORPORATION: Folts and Stillman, *Interpretive Accounting*, pp. 195-205
- ELEMENTS OF CORPORATION ACCOUNTING: Scovill and Bailey, *Elementary Accounting*, Part Two, pp. 312-340
- CORPORATIONS; ACCOUNTING FOR CORPORATE OWNERSHIP: McCarty and Amidon, *Survey Course in Accounting*, pp. 288-296
- RECORDS PECULIAR TO A CORPORATION: McKinsey, *Bookkeeping and Accounting*, pp. 563-572
- CORPORATIONS: Woodbridge, *Elements of Accounting*, pp. 398-426
- THE CORPORATION: Marshall and Lyon, *Our Economic Organization*, pp. 271-288

PART VI

THE USE OF INFORMATION IN THE VARIOUS
ACTIVITIES OF BUSINESS

CHAPTER XXIII

THE ACTIVITIES OF BUSINESS

PURPOSES OF THIS CHAPTER

1. To explain what is included in the work of business administration
 2. To outline the major activities of business and the subordinate divisions of each
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The first part of this book was devoted to discussing the preparation and use of the two most important accounting reports, namely, the balance sheet and the statement of income and expense. It was pointed out in Part II that these two are not the only useful reports but that in fact a great many forms of reports are necessary in the administration of the affairs of a large business. To administer each of the major activities of business, much information is needed. Important in this information is the past experience of the business. Most of this can be obtained from the accounting records. Part of it may be ready to use just as it appears on the books, part of it must be compiled from sales tickets or purchase invoices or other business papers, but in one way or another very valuable information for department management is contained in the files of the accounting department. In the present part of this book, the use of accounting records and reports in the administration of each of the several major activities of business will be discussed.

A manufacturing concern will be used as an example in this part of our study. That which is learned from studying

such a company may be applied to many other kinds of business. In some cases, special applications, such as those found in retail establishments will be specifically stated.

Before the use of accounting reports in the administration of business can be discussed, it will be necessary to see what the major activities of a business are. On page 385 there is a chart of a typical manufacturing business. At the top of the chart are placed the names of the owners of the business, who are the stockholders if the business is organized as a corporation. Authority is delegated by the stockholders to the board of directors who may meet as often as once a month to pass upon important matters of policy. The board selects certain of its members to act as a finance committee and an executive committee, these committees meeting more often than the board as a whole could conveniently meet. The board also chooses a chairman who may be the president of the company, as well as chairman of the board. The vice president and general manager, and the other important executives are also usually chosen by the board of directors.

There are five major business activities (1) marketing, (2) production, (3) purchasing, (4) finance, and (5) records and reports. Each major activity is made up of a number of subordinate activities. The phases of business activity and the subordinate divisions of each are indicated on the chart. Each major activity is placed under a responsible executive.

Marketing is an important activity of business.—The marketing department is one of the most important departments because the business cannot survive unless it has a constant flow of sales. Every product, no matter how low in price or how good in quality, requires sales effort; and the entire business depends upon the sales department. The work of the sales manager is to help plan what is pro-

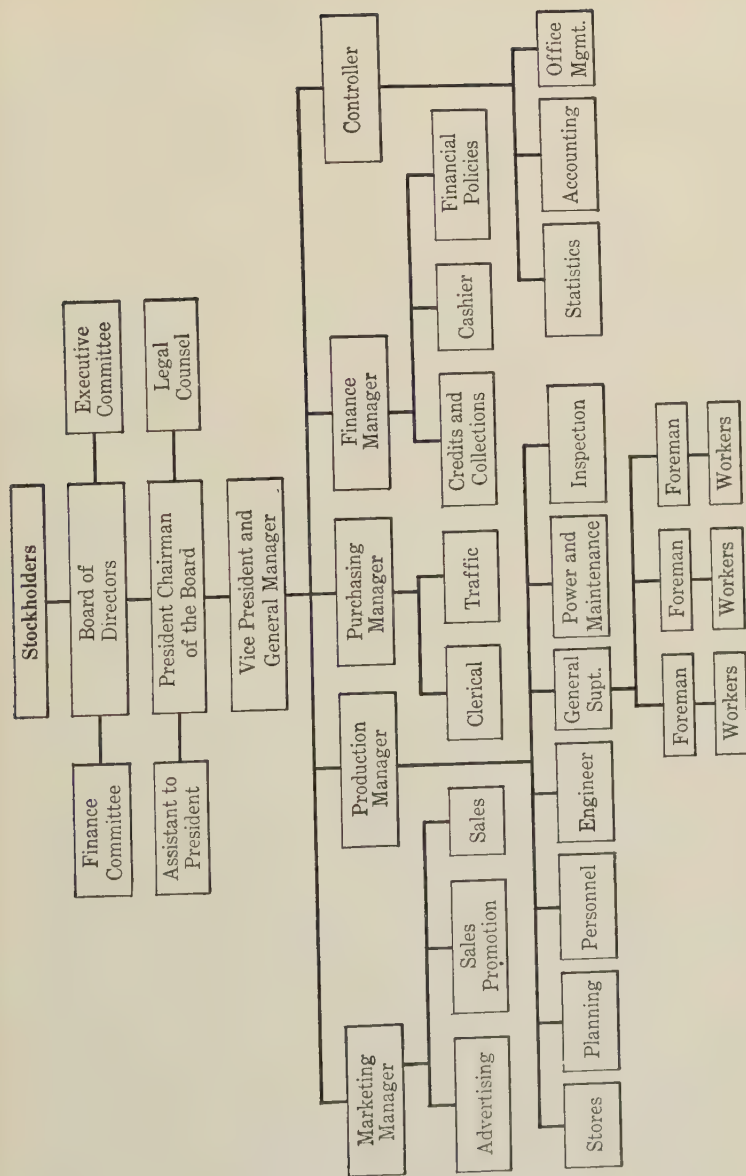


Figure 2.—ORGANIZATION OF A MANUFACTURING BUSINESS

duced and to sell the output of the company. He must therefore be consulted in the formulation of the production plans. The marketing manager must undertake to know what can be sold profitably. He does not content himself with following the demands of the public, but attempts to direct the tastes of the consumer and to create a demand for the products of the company. It is the work of the sales promotion division of the marketing department to keep in constant touch with jobbers or others through whom the business does its selling and to aid them in disposing of the goods. If the sale of some particular product is not coming up to expectations, it is the duty of the sales promotion division to discover the cause of the difficulty and to stimulate the sale of the product. Sales research and investigation, therefore, constitute a large part of the work of the sales promotion division. The advertising division aids in the work of selling by preparing the advertising, selecting the magazines and other advertising media in which the advertisements are to appear, and deciding on the products or policies of the company which should be featured in the advertisements.

The sales division manages the home office, selects, instructs, and directs the salesmen in the field, and does what it can to stimulate the salesmen to make greater sales or to sell products which the company is most anxious to sell. This may mean to increase the sales of those products on which the company makes the greatest profit or those which are not moving as they should move. The supervision of the work of branches and foreign offices is also a part of the work of the sales division.

The marketing manager is responsible for the formulation of general sales policies, though he shares this responsibility with other executives in so far as their departments are

concerned. In such matters as guaranteeing the product to last a certain time or to give service to the customer, or in such matters as allowing sales discounts to customers, or granting trade discounts to certain branches of the trade, or rendering aid to the dealer by supplying him with display racks or advertising material, the sales manager is usually consulted and, in some cases, has the responsibility for making the final decision. It can be readily seen, however, that the sales manager must coöperate with the treasurer, the production manager, and other executives, in the formulation of the sales policies, and that each executive must be always informed as to what the others are doing.

A second important activity is that of production.—The production department, is usually the largest department of the business. It is responsible for all phases of factory organization and management. The more important divisions of the production department are indicated on the chart. The stores division sees to the checking in of materials purchased, the arrangement of the materials in the storeroom, and the issue of materials when such issue is properly authorized. The planning division plans the work of the factory, deciding what orders shall be given preference, when work on an order should be begun, what machines should do the work at each stage of production, and where the order should be in the plant each day from the time it is started through the plant until work on it is completed. The planning department, through the foremen, also issues the orders to the workers in the plant to perform the necessary operations of manufacture on the material. The personnel division performs a number of duties relating to the management of employees. It has charge of the selection of workers for the plant, sees that new workers are properly instructed in their jobs, interviews workers who leave the

plant to determine if possible their reasons for leaving, keeps records showing the reasons why workmen are discharged, and looks after the transfer of workers from one department of the plant to another. It also attempts to build up a loyal and efficient working force by rendering various kinds of service work, such as providing first aid, publishing a plant magazine or newspaper, organizing competing athletic teams, and in other ways. The personnel division is a very important one, and, in many plants, the personnel manager is a major executive ranking along with the marketing manager and the production manager. The engineering division is charged with the duty of designing the product, selecting the type of machinery to be used, and arranging the layout of the plant. The factory superintendent is in charge of the foremen, and through them, directs the workers in the plant. The power and maintenance division is responsible for the operation of the power house and for keeping the machinery and buildings in repair. The inspection division inspects the raw material purchased to see that it meets the prescribed specifications. It also inspects the finished product, and it may inspect the work in process at various stages of manufacture.

Purchasing is a third important activity of the manufacturing concern.—Purchasing is frequently considered a part of production, but it may be regarded as a separate main task. It is the duty of the purchasing manager to buy the kind of raw material which is best suited to the needs of the factory and at the best price obtainable. To buy the material best suited to the needs of the factory does not, of course, mean that only the best grades of material should be purchased, for in many cases a cheap grade of material is as good for the purpose as a better grade. For example, it is not necessary that every piece of wood that goes into

furniture should be of the kind that will take a high finish for if the part will not be exposed, a cheaper grade of material will serve as well. It is the duty of the purchasing manager to know what is the best material for the purpose, though he must secure the coöperation of the production manager in his buying. In deciding what is the best price, allowance must be made for quantity discounts and cash discounts, also for promptness of delivery and the quantity which can be supplied at the price quoted. The purchasing manager must see that production is not at any time delayed for want of raw material, but the supply on hand must not be so large that capital is unnecessarily tied up in inventory or that valuable storage space is used for supplies that are not really needed. The purchasing manager must thus see that the inventory is large enough but not too large. In addition to buying raw material or finished parts, the purchasing manager may at times buy office equipment or machinery upon requisition from the proper authority.

Traffic and transportation problems are usually handled by the purchasing manager, though sometimes traffic is a part of the marketing division of the business. If the business buys its raw materials from a number of sources and if most of the traffic problems arise in connection with purchasing, the traffic division is a part of the purchasing department. If, however, most of the traffic problems arise in connection with shipments to customers, then traffic is a part of the marketing activity.

It should be noted that in a retail business, there is usually no separate division of purchasing. Buying and selling in a retail concern are very closely related, and are generally directed by the same person or persons. In a department store, the head of each selling department does the buying for his department under the general supervision of the

merchandise manager to whom the various department managers are responsible for the efficient conduct of their respective departments.

Financial management is a fourth important activity of business.—Every business has its problems of financing. Some businesses raise a large part of their capital by means of the sale of stock. The financial problems of such businesses are not of the same nature as the financial problems of businesses that raise large amounts of capital by the issue and sale of bonds, since there are no maturing bond issues to meet and the fixed charges for interest are relatively small. All businesses borrow some money from banks, however, either directly or through commercial paper houses; and as the business expands, management is confronted with the problem of the method of raising additional capital. Decision must be made as to whether the funds will be raised by the sale of stocks or bonds or promissory notes, or by the retaining of the profits in the business. These decisions are made by the financial committee of the board of directors acting in coöperation with the treasurer who is the head of the financial department. The efficient handling of financial matters and the formulation of plans for the repayment of bank loans, long-time notes, and bonds requires a knowledge of the capital needs of the business and the plans for expansion for a long time ahead, also a knowledge of the probable profits of the business. Much of the information needed in the solution of these financial problems can be obtained from the accounts. Of course, the financial manager must be informed about conditions existing outside the business. He must know the kinds of financial institutions through which he may borrow, such as commercial banks, bond houses, commercial paper houses, discount companies, and other institutions. He must also

be familiar with the instruments which he can use, such as stocks, bonds, notes, and drafts. He must carefully study the movements of interest rates both for short-time loans and for bonds, and he must know when to use short-term notes and when to use bonds in his financing. In addition to the formulation of financial plans for the business, the management of finance includes the actual handling of the receipts of cash and the making of the disbursements upon proper authorization. This division of the financial department is under the control of the cashier who is responsible to the treasurer.

A third division of the treasurer's department is that of credits and collections. This division passes upon applications for credit, establishes credit limits for customers both as to the amount which may be purchased at any one time and the total amount which the customer may owe whether on one order or on several orders. Any purchases by the customer in excess of the credit limits established by the credit division must be specifically referred to that division for its approval or disapproval before the order is filled. This division also supervises the collection of customers' accounts and especially the overdue accounts.

The work of keeping records and preparing reports constitutes a fifth important activity.—The records and reports activity, which is placed under the supervision of the controller, includes accounting, the preparation and execution of the budget, office management, and statistical work. The accounting work includes all of the divisions of accounting previously discussed in this book, such as the keeping of the accounts receivable ledger, the accounts payable ledger, and the general ledger. In addition, the cost accounts, which have not yet been discussed, are usually kept in the office of the controller although the keeping of the

cost records is sometimes placed under the control of the production manager. The budgetary work includes the supervision of the preparation of the estimates of sales, expenses, cash receipts, and cash disbursements, and other divisions of the budget, and the preparation of reports showing the actual sales, and expenses, and comparing the actual with the estimated results. Office management includes the handling of the stenographic work, the mimeographing and duplicating work, the receiving and opening of incoming mail, the preparation and mailing of outgoing mail, the receiving and sending of telegrams, and the operation of the telephone board. Statistical work is also a part of the records and reports department. The statistical work includes the preparation of reports showing the condition of the business, such as the size of the inventory of various items of materials, and the results of various activities, such as the sales made by each sales person or by each outside salesman. If any statistics of general business or money market conditions are compiled or charted, this work is done by the statistical division. Although the keeping of records and the preparation of reports constitute a distinct activity of business, this work is frequently placed under the supervision of the treasurer.

Information is needed in the administration of each of the activities of business.—Each executive who is placed in charge of one of the activities of a business must have certain information about what is being done and what is planned. Some of this pertains to his own department; some of it pertains to other departments. The sales manager, for example, must know how much and what kinds of goods each of his salesmen is selling. He must know which lines of goods yield the greatest profit to the business. He must know the volume of sales of his company which are

being made in each section of the country. He must also know the amount of each line of goods which the factory is producing and how much the factory plans to produce. He must know whether the financial condition of the business will permit a further expansion of sales and the tying up of additional amounts of capital in accounts receivable or notes receivable. In the same way each of the other executives must have information which will permit him to judge the efficiency of his subordinates, and to work out the policies of his department, and also to correlate the activities of his department with those of other departments of the business. Some of the information which is needed can be obtained from the balance sheet and the statement of income and expense, but much of it must be obtained from other reports.

It should be repeated that some of the information needed in business administration can be obtained from the accounting records previously described in this book, but a great deal of it must be compiled from other sources. The amount of sales made by each salesman, for example, is not to be found in the accounts but must be compiled from the sales invoices. A report of this kind is sometimes called a statistical report instead of an accounting report, but, regardless of the name applied to it, the compilation of such a report is an integral part of accounting. Accounting is, in fact, one branch of statistics, for as was pointed out in preceding chapters, accounting is merely a method of gathering, classifying, assembling, and interpreting information pertaining to the financial condition of a business.

QUESTIONS FOR DISCUSSION

1. What is the relation of the stockholder to the administration of business affairs?
2. What important duties are performed by the board of directors?

3. What is the work of each of the committees of the board of directors?

4. Distinguish between the duties of the executive, sometimes called the market manager, and the duties of the sales manager. Many companies give all the duties of a market manager to an executive called a sales manager. Does this change the nature of the work involved?

5. What are the duties of the production manager?

6. What are the duties of the personnel manager? Is the personnel manager usually authorized to direct the work of the employees?

7. Explain why purchasing may be considered either a separate activity or a part of the production activity?

8. Compare the purchasing activity of a retail concern with that of a manufacturing concern.

9. Does the finance manager determine important financial policies, or are they determined by the board of directors? What financial policies might the finance manager be responsible for?

10. What is the relation of the cashier to the accounting division?

11. Why should credits and collections be considered a single activity?

12. Why are credits and collections placed under the finance manager rather than under the sales manager? What is the relation of selling to credits and collections?

13. Show how the four activities placed under the controller are related to each other.

14. Is it necessary for a general manager to know as much accounting as his accountant? As much about production as his production manager?

15. How are the various activities in manufacturing dependent each upon the other? Take the problem of promotion of employees, for example, and show how it might affect other activities.

PROBLEMS

1. Smith and Jones, partners, are engaged in the retail grocery business. Smith purchases all the goods, and attends to cash receipts, and disbursements and all financial matters such as collecting accounts. He keeps all records and supervises the preparation of all reports. His partner, Jones, supervises all the selling, employs clerks, etc.

(1) Draw up an organization chart for their business.

(2) Write a report stating why you favor the organization you recommend.

2. Wells and Simpson own and operate a garage as partners. Wells is a good administrator and Simpson is a good mechanic. They agree that each should be held responsible for a certain amount of the work. Assume a large garage business engaged in buying and selling new cars, operating a used car department, and dealing in parts and accessories.

- (1) Draw up an organization chart for this business.
- (2) Write a report stating why you favor the organization you recommend.

3. The Universal Manufacturing Company is a very large concern engaged in the manufacture of harvesting machinery in Chicago. The purchasing manager has one assistant who purchases all steel, another who purchases all lumber. He, himself supervises these purchases, and, in addition, purchases all the supplies. The production manager has several foremen under him who look after the various steps in production. The sales manager has two assistants, one in charge of advertising, the other in charge of selling. This assistant manager in charge of selling has three assistants: one in charge of domestic sales, one in charge of sales in South America, one in charge of sales in European countries. The personnel manager has several assistants. All financial matters are in charge of a financial manager under whose jurisdiction are the treasurer, auditor and counsel.

- (1) Draw up an organization chart for this company, assuming any additional information you see fit.
- (2) Write a report to the president of the company stating why you favor the kind of organization you recommend.

4. The American Furniture Company is a large concern with three plants manufacturing furniture. There is reason to believe that the business is not being administered properly. An examination of the business discloses the following facts:

- (1) There is a wide difference in cost of raw materials and labor, in the various plants and hence a difference in cost of each unit of furniture manufactured.
- (2) Two of the branches, A and B, keep far too much raw material on hand.
- (3) Customers complain that the product turned out by plant A is inferior in quality. This may have been due to the use of unskilled workmen or defective raw material.
- (4) Plant B is very slow in filling orders.

- (5) Both plants A and B have a great many bad debts.
- (6) Plant A does not pay its debts promptly.
- (7) Plants A and B pay their salesmen very high wages.
- (8) There are evidences of poor bookkeeping and accounting in both plants A and B.
- (9) Plant C is operating on a very satisfactory basis. Write a report to the president of the company stating:
 - (a) Wherein you believe the administration defective.
 - (b) What do you recommend as a solution to the difficulty?

REFERENCES FOR FURTHER STUDY

- THE TASK OF THE BUSINESS ADMINISTRATOR: Marshall and Wiese, *Modern Business*, pp. 38-57
- THE ELEMENTS OF BUSINESS: White, *Business Management, An Introduction to Business*, pp. 3-13
- ORGANIZATION AND PAPER WORK OF A PLANT: Woodbridge, *Elements of Accounting*, pp. 239-268
- THE TASKS OF THE BUSINESS ORGANIZER: Lyon, *Making a Living*, pp. 109-113
- INTERNAL BUSINESS ORGANIZATION: Marshall and Lyon, *Our Economic Organization*, pp. 397-415

CHAPTER XXIV

THE USE OF INFORMATION IN MARKETING

PURPOSES OF THIS CHAPTER

1. To show what information is needed by the market manager
 2. To show how the information relating to sales is classified and arranged
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Every business has its marketing problems, though some businesses must devote more time and attention to the solution of these problems than do other businesses. No product will sell itself so well that the management can neglect to make efforts to push its sale, for even though some sales may be made easily, the volume of sales may be increased with profit to the company if some sales effort is made. Some of the kinds of sales effort which manufacturing concerns find it desirable to make are indicated in the diagram of the marketing department on page 398. The divisions of the marketing department have already been discussed in Chapter XXIII and need not be elaborated upon here.

Many kinds of information are needed in the administration of marketing.—The kinds of information necessary in market administration are so many that only somewhat general illustrations can be mentioned here. The sales manager must know the territory that is being served and the buying power and tastes of the possible customers. He must know how to select salesmen who will be successful in selling the particular products of the company. He must know how to train the salesmen and to stimulate them to

secure the necessary sales orders. All this requires a knowledge of human nature and psychology. He must also know which salesmen are bringing in the largest orders and which salesmen are selling the products on which the company makes the largest profits. If the company sells through branches, he must be informed at all times as to the sales and the expense of each branch and the amount of inventory on hand at each branch. The advertising manager

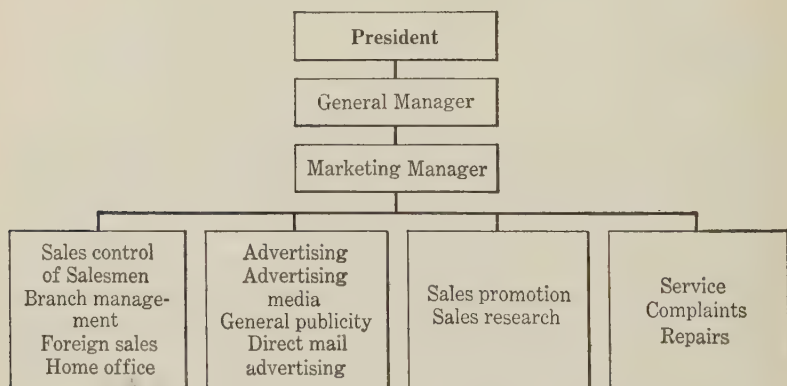


Figure 3.—ORGANIZATION OF MARKETING DEPARTMENT

must know the form of advertising (newspaper, magazine, circulars sent through the mails, or other kinds of advertising) which brings the best results for the company. He must know how to choose the particular papers or magazines in which to run the advertisements, the kind of appeal to make, the particular product and the feature of that product to use in making the appeal to the prospective customer. The sales promotion division must keep in constant touch with the movement of goods in order that it may stimulate sales by placing special effort where it is needed. The service division must know what sales are made in order that

it may follow up the sale to see that the customer is kept satisfied. It is apparent from these examples that a great deal of information is needed in the administration of marketing.

The information needed in marketing is obtained from many sources.—Much of the information needed in marketing must be obtained from sources outside the business, such as census reports, reports on general business conditions prepared by independent statistical organizations, and circulation statements of newspapers. Some of the information can be obtained from the accounting records. A report of sales by months of the year, for example, which would be of value in anticipating peak loads and dull seasons, can be prepared directly from the accounts. Sales by branches may also be recorded in the accounts in such a way that the reports may be compiled from the accounting records. Much information pertaining to the marketing division of the business must be compiled from sales invoices or other business papers.

One of the most important kinds of information obtained from the records of the business is the information pertaining to sales, and we shall now turn our attention to the problem of sales analysis.

Sales may be classified in a number of ways.—Sales may be profitably classified in at least six different ways, though no one concern will classify its sales by all these methods. One classification may be recorded in the accounts, and any other classifications desired may be made by tabulating the information which can be obtained from the sales invoices. The kind of sales classification which is needed is determined largely by the nature of the business. The six ways of classifying sales, which will be discussed in the order named, are as follows:

1. By commodities or departments
2. By branches
3. By terms of sale
4. By territories
5. By salesmen
6. By method of delivery

The analysis of sales according to commodities or departments adapts itself readily to a business which trades in only two or three commodities or lines. Take, for example, a hardware store such as one sees in many small communities. The data for sales by commodities may be obtained by placing several columns in the sales book to permit of sales classification, in the following manner:

Accounts Receivable Dr.	Hardware Sales Cr.	Farm Implements Sales Cr.	Engine Sales Cr.
78.25	78.25		
112.50	112.50		
1,346.25		1,346.25	
4,115.00		2,865.00	
			1,250.00 etc.

The advantage of this arrangement should be apparent. If this form of sales journal be accompanied by a purchase journal using the same classification and by a like classification of inventory, it is possible at any time to obtain the gross profit on each commodity. Thus a business is able to determine which commodity nets it the greatest return, and, consequently, in which commodity it is most profitable to deal. By comparing these data from month to month, any variation showing increased or decreased sales is easily detected, and this serves as a guide to the retention or abandonment of certain lines of goods. If expense could be

WALKER HARDWARE COMPANY

STATEMENT OF INCOME AND EXPENSE FOR THE YEAR ENDING DECEMBER 31, 1929

Sales of Hardware		\$15,280.50	
Cost of Hardware Sold:			
Purchases of Hardware	\$9,874.28		
Freight In on Hardware	302.80		
	<u>10,177.08</u>		
Beginning Inventory of Hardware	3,513.22		
	<u>13,690.30</u>		
Ending Inventory of Hardware	3,785.25		
Cost of Hardware Sold		<u>9,905.05</u>	
			\$5,375.45
Sales of Farm Implements		20,350.90	
Cost of Farm Implements Sold:			
Purchases of Farm Implements	15,600.00		
Freight In on Farm Implements	450.50		
	<u>16,050.50</u>		
Beginning Inventory Farm Implements	1,200.00		
	<u>17,250.50</u>		
Ending Inventory Farm Implements	2,342.90		
Cost of Farm Implements Sold		<u>14,907.60</u>	
Gross Profit on Farm Implements			5,443.30
Sales of Engines		8,508.75	
Cost of Engines Sold:			
Purchases of Engines	6,555.40		
Freight In on Engines	650.75		
	<u>7,206.15</u>		
Beginning Inventory of Engines	2,300.10		
	<u>9,506.25</u>		
Ending Inventory of Engines	3,110.04		
Cost of Engines Sold		6,396.21	
Gross Profit on Engines			2,112.54
Total Gross Profit			<u>12,931.29</u>
Operating Expenses			
Selling Expenses (Schedule to be attached)		2,300.00	
Administrative Expenses (Schedule to be attached)		<u>5,250.85</u>	
Total Operating Expenses			7,550.85
Net Profit			5,380.44
Other Income (Schedule to be attached)			750.70
Gross Income			<u>6,131.14</u>
Nonoperating Expenses (Schedule to be attached)			210.00
Net Income			<u><u>\$5,921.14</u></u>

classified by commodities and the net profit on each commodity determined, the management would have an even better guide in making its plans for the future. But expenses are not easily classified by commodities because many expenses are incurred for the business as a whole and not for particular commodities. This is true, for example, of rent, heat and light, and officers' salaries. It is, therefore, usually considered sufficient if the gross profit of each commodity is determined, though selling and administrative expenses are sometimes allocated to individual commodities.

On page 401 is a statement of income and expense for a hardware business which classifies its sales, purchases, and inventories by commodities. Selling expenses, administrative expenses, other income, and nonoperating expenses are each shown in total. The report is ordinarily accompanied by a schedule of each group, but the schedules are omitted because they involve no new principle.

The classification of sales by commodities is impossible in a business dealing in a great variety of articles, as in the case of a department store or a manufacturing concern which produces a number of different kinds of articles. The classification of sales, purchases, and expenses which such a business may use is a classification by departments. The debit and credit columns of the sales journal of the department store follows this arrangement:

Accounts Receivable Dr.	Shoe Sales Cr.	Clothing Sales Cr.	Furniture Sales Cr.

It is possible to classify expenses of the department store by departments, so that both the gross profit and the net

profit of each department may be determined. This information is very valuable to the management, for each department manager may be held responsible for the showing made by his department. This information also enables the management to know whether it pays to continue a certain department or a certain line of goods. It should be noted, however, that the management may be compelled to continue a department even though it is losing money by doing so. If the customer expects to make all of his purchases from one company, in the case of the manufacturing company, or all under one roof, in the case of the department store, the management may be compelled to continue to manufacture or to sell the unprofitable line of goods in order to sell the profitable lines. The information about the profits of that line is, nevertheless, very valuable to the management because it permits the decision to continue or to discontinue the line of goods to be based upon fact rather than guesswork.

Sales may be classified by branches.—Large concerns which sell their goods to consumers scattered over a wide area use different methods to reach their customers. A manufacturing company located in Cincinnati may have branches in Detroit, St. Louis, and Chicago. The use of branches makes it possible to keep in close touch with the trade, to make quicker deliveries and at less expense, and to eliminate the profits of middlemen. Carefully kept records will show the main office what is being accomplished. The record of the main office might show:

Accounts Receivable Dr.	Sales of Detroit Branch Cr.	Sales of Chicago Branch Cr.	Sales of St. Louis Branch Cr.

A similar classification of purchases and expenses, that is, according to branches, will show the profits derived from each branch. Furthermore, this classification might be supplemented by commodity classification of sales and expenses for each branch. This arrangement will show whether each commodity is being sold at a profit or a loss. Information of this nature is a valuable guide to management, because the records may indicate that one commodity should be discontinued in the St. Louis region and developed in the Detroit district. Thus an effective check is kept upon the operations of each branch, and those who are responsible for the efficient direction of a branch may be promoted or rewarded in other ways for their success.

Sales may be classified according to the terms of sale.—Analysis of sales according to the terms of sale is especially important to the treasurer of the company. Whether the sales are on account, for cash, or cash on delivery determines the length of time the concern must wait before payments are received. The financial department is subject to a constant demand for cash in payment for services and materials and supplies. It must know when to expect collections on the sales if it is to plan the financial budget.

On the basis of terms of sale, sales may be classified as follows:

1. Sales on account
2. Cash sales
3. C.O.D. sales
4. Installment sales
5. Sales on approval
6. Sales for future delivery
7. Consignment sales

Sales on account. Except in a business conducted upon a cash basis, selling on account is the usual method. Such

sales are made with the understanding that payment is to be made within a reasonably short time. It is common practice for department stores to send out monthly bills so that payments can be made at the beginning of the succeeding month. In order to encourage prompt payments, manufacturing companies and wholesale houses usually offer a discount from the face of the invoice if payment is made in cash within a stated number of days. The rate of discount depends upon the nature of the business and its financial policies.

Cash Sales. In a retail store, sales are usually for cash or on account; in a manufacturing or wholesale business, sales are usually on account. In the former, the amounts of the various cash sales may be obtained from the sales slips and entered in the cash records daily as a total. Regardless of whether such cash sales are entered in the cash book individually or as a daily total, it is best to have a special column in that book for Sales, credit, in which the amounts are shown. The posting of the cash sales to the Sales account is facilitated in this way. If this method is followed, there will be two postings on the credit side of the Sales account: one of cash sales from the cash book; the other of account sales from the sales book.

The method of entering cash sales is more complicated if it is desired to classify sales, both credit sales and cash sales, by commodities or departments. It is not satisfactory to have a detailed classification of sales in the cash book, because too many columns would be required. Instead, it is better to enter the cash sales in both the cash book and the sales book. In the cash book, the sales are entered as debits to Cash and credits to Sales, regardless of the kind of sale. The debit to Cash is posted when the Cash column is totaled and the total for the month is posted. The credit

to Sales is checked to indicate that it is posted from another journal. In the sales journal, the cash sale is entered as a debit to Cash and a credit to the sales of the individual departments or commodities. From this book, however, it is the credit which is posted, while the debit is not posted. The debit to Cash is checked to show that it is posted from another journal. Thus both the debit and the credit get posted, and the total cash receipts are entered in the cash book without the necessity of a great many additional columns.

Sales on consignment. The method of making sales on consignment is employed when the manufacturer is attempting to introduce a new product or, for other reasons, finds it difficult to enter a new market or maintain himself in an old one. It is also used when the manufacturer wishes to keep close control over the goods until they are sold. Under this arrangement, the goods are shipped to the retailer or other distributing agency, but the goods are not sold to the retailer; they still belong to the manufacturer. After the retailer has sold the goods, he reports to the manufacturer the selling price, and after deducting his commissions and other expenses incurred in connection with the shipment, he remits the balance to the manufacturer. Until the sale is made by the retailer, the goods are part of the inventory of the manufacturer. The owner of the goods, who is usually the manufacturer, is called the *consignor*. The agent of the consignor, who is usually a retailer, is the *consignee*. The shipment of goods is known as a *consignment*.

The method of accounting for consignment sales is shown by the following illustration. Suppose J. W. Warner sends 200 articles of Y commodity to R. P. Howe to sell on account. Warner pays \$40 for drayage and \$60 for insurance.

Howe pays \$135 for freight and drayage and charges \$57 for storage. Howe, the consignee, sells the goods for \$1,500, and remits the proceeds to Warner, the consignor, after he has deducted his commission of 5%.

Warner's record is as follows:

1. At the time the goods are sent:		
(a) Consignment Out (Howe)	\$100	
Cash		\$100
Drayage \$40, insurance \$60, paid in cash.		
2. At the time notice of sale is received by consignee:		
(a) Cash	\$1,233	
Consignment Out (Howe)		\$1,233
To record net proceeds of consignment.		
(b) Consignment Out (Howe)	1,133	
Sales on Consignment		1,133
To transfer net returns from consignment to sales account.		

Howe's record is as follows:

1. On receipt of consignment:		
(a) Consignment In (Warner)	\$135	
Cash		\$135
Payment for freight and drayage.		
2. When consignment is sold:		
(a) Consignment In (Warner)	\$132	
Comm. earned		\$75
Storage earned		57
Charges on Warner's consignment:		
(b) Cash	1,500	
Consignment In (Warner)		1,500
Record sale of Warner's consignment.		
3. When the proceeds are remitted to the consignor:		
Consignment In (Warner)	\$1,233	
Cash		\$1,233
To record payment of proceeds of consignment to Warner.		

The method of recording sales on consignment here explained enables the management to know the net proceeds of each sale and to know the total net proceeds from all sales on consignment. If the management prefers, the

expenses incurred in connection with sales on consignment may be charged to the usual expense accounts, such as Freight Out, Drayage, and Insurance, and the proceeds of the sales may be credited to the Sales account. If this method is followed, a tickler file showing the various shipments of goods sent out on consignment should be maintained. When a report and remittance are received from the consignee and the transaction is completed, the memorandum of the shipment should be taken from the files and an entry made debiting Cash and crediting Sales.

Other kinds of sales. C.O.D. sales are made upon an agreement that payment will be made at the time of delivery of the goods. The method followed in recording wholesale C.O.D. sales is to debit Accounts Receivable and credit Sales in the same manner as other sales. Retail stores usually have one C.O.D. Accounts Receivable account in the ledger to which all C.O.D. sales are debited, the name of the customer being written in the explanation column. The sale is credited to the usual sales account. When the account is collected, credit is made to the C.O.D. account on the same line as the corresponding debit. Thus the debit is offset by the credit. In department store C.O.D. sales, it is usual to charge the driver with packages given him, and when he returns with the cash, to make an entry as if the sale had originally been for cash.

Installment sales are those upon which the payments are deferred and made in installments. A great deal of furniture is sold under this arrangement, because it enables people to buy who would possibly never accumulate enough to pay for the article in one payment. Payment may be deferred with the understanding that the various obligations will be met at stated intervals, or the person to whom the goods are being sold may give notes to be met upon various dates.

Title to the goods, however, usually remains in the seller until the final installment has been paid.

Accounts Receivable arising from installment sales should not be listed with other Accounts Receivable because, in many cases, they are not to be paid for several months. Moreover, installment accounts are difficult to collect and hence the allowance for bad debts in respect to them should be reckoned upon a basis entirely different from that used in estimating losses on other accounts receivable. It is, therefore, expedient to maintain separate records for accounts receivable arising out of ordinary transactions, and for accounts receivable arising out of sales on installment.

It is the practice for some companies to deliver goods to customers on approval with permission to return them within a specified time. This is frequently done by publishing companies selling books. The sale is usually not recorded until the books have been accepted and the cash received. The company files the sales invoice under the date the book should be returned or paid for. If payment is received, the invoice is removed from the file and the sale recorded. If the book is returned, the invoice is removed from its file and no record of sale is made. Many retail stores deliver goods under the same arrangement and record the facts in much the same manner.

A great many sales are made for future delivery. No entry should be made for a sales order until the goods are shipped to the customers.

One method of showing the classification of sales by terms of payment is illustrated by the bar chart on page 410. In a department store, a classification of this sort would have to be made for each department because the departments would show great variations from each other. The furniture department, for example, would make a large per-

centage of its sales on account and on installment, while the notions department would make a large percentage of sales for cash. The percentage distribution of sales by terms of payment is shown in the chart below. These percentages, it will be observed, add to 100%, thus accounting for the total sales of the department.

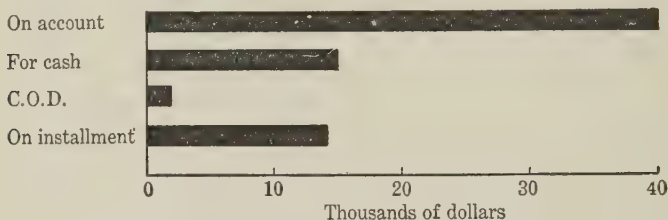


Figure 4.—SALES CLASSIFIED BY TERMS OF SALE



Figure 5.—SALES CLASSIFIED BY TERMS OF SALE

Sales may be classified by territories.—Many manufacturing concerns and wholesale houses sell their goods through traveling salesmen, allotting a certain district or territory to each salesman. The size of the territory allotted to one salesman depends upon the nature of the commodity or commodities to be sold, the kinds of dealers to be visited and the number of dealers in the territory, the kind of competition met with in selling, and similar considerations. Classification of sales by territories aids in planning future sales and also serves as a check upon the salesmen. If there is only one salesman to each territory, classification of sales by territories is the same as classification by salesmen. In many cases, however, it is desirable to group the territories

of a number of salesmen in order to determine the total sales in each section of the country. It may be desirable, for example, to know the total sales by states, or by groups of states, in order to determine the results of advertising campaigns, or the best sections for expanding the sale of the products of the company.

Sales may be classified by salesmen.—Most businesses, whether manufacturing, wholesale, or retail, wish to know the amount of the sales made by each salesman. Many companies pay the salesman a commission in addition to a salary, while others pay a commission only. This classification of sales is, therefore, necessary as a basis of payment. In any case, it is necessary to know the amount of sales made by each salesman in order to have a check upon his efficiency. Many companies pay a commission based upon the amount of gross profits. If the information necessary for paying a commission based upon gross profits can be obtained without too much expense, this method is to be preferred to that of paying a percentage of sales.

In order that the sales manager may be able to visualize the work of his salesmen, the monthly sales of each salesman should be charted in a manner similar to the chart shown on page 412. This kind of chart enables the sales manager to see which of the salesmen are doing the best work; and if the chart is kept up to date each month, the sales manager can know which salesmen are failing to bring in orders in time to be of assistance to those men who need to be helped.

Most companies assign sales quotas to their salesmen. These quotas are based upon careful estimates of what may reasonably be expected of the salesman, and purchases and production plans of the business as well as plans for other expenditures are made with the expectation that these quotas will be realized. Where quotas are assigned, it is

very important that the sales manager know at all times whether the salesmen are accomplishing what has been planned for them. If the amount of goods fixed by the quota is not being sold, or if the quota is being exceeded, it will be necessary to revise the plans for the other departments of the business.

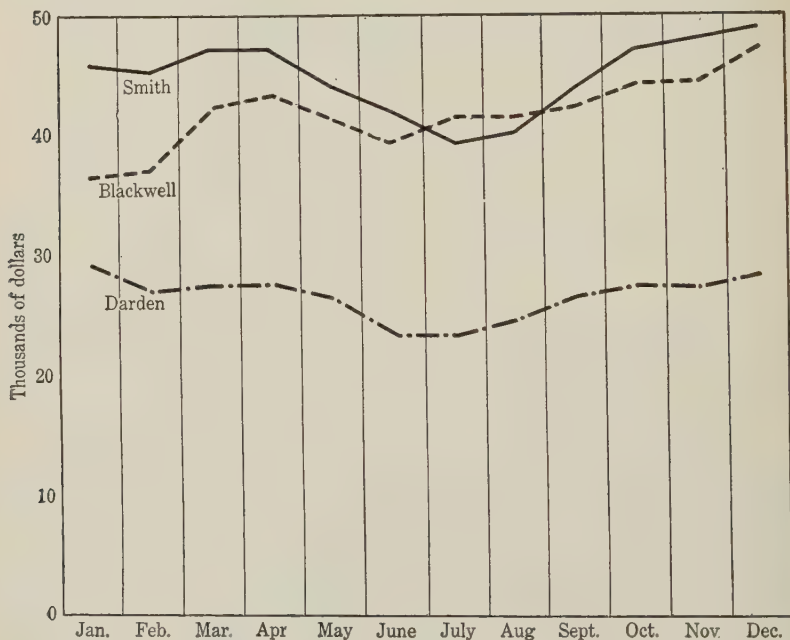


Figure 6.—SALES CLASSIFIED BY SALESMEN

The method of compiling and presenting to the sales manager the information pertaining to sales quotas may be illustrated by a concrete case. The table below shows the sales made by J. W. Mattingly as compared with his sales quota, by months for the year 1929. The first two columns show the data arranged as totals for each month, while the

second two columns show the total to the end of each month. For example, the sales quota for the first month was \$19,000 and for the second month \$16,000, so that by the end of the second month Mattingly should have sold a total of \$35,000. His sales for the first two months, however, were only \$33,000, so that he was \$2,000 short of his quota at the end of February. The quota for the year was \$179,500 and at the end of the year he was short of his quota by \$5,500.

SALES OF J. W. MATTINGLY COMPARED WITH SALES QUOTA, 1929

Month	Monthly Totals		Cumulative Totals	
	Sales	Quota	Sales	Quota
Jan.	18,000	19,000	18,000	19,000
Feb.	15,000	16,000	33,000	35,000
March	16,000	15,000	49,000	50,000
April	10,000	12,000	59,000	62,000
May	8,000	11,000	67,000	73,000
June	12,000	10,000	79,000	83,000
July	15,000	12,000	94,000	95,000
Aug.	19,000	15,000	113,000	110,000
Sept.	19,000	20,000	132,000	130,000
Oct.	15,000	18,000	147,000	148,000
Nov.	15,000	16,500	162,000	164,500
Dec.	12,000	15,000	174,000	179,500
	174,000	179,500		

The sales made by the salesman may be more readily compared with the sales quota by means of charts than by means of tables. The chart on the next page shows the monthly sales of J. W. Mattingly as compared with his sales quota. By means of this chart it is very easy to see the months in which the quota was exceeded and the months in which the sales were short of the quota. At the beginning of the year when the quotas are assigned, a chart of this sort should be prepared with the quotas indicated by a

dotted line. Each month, as the sales reports are received, the actual sales should be recorded on the same chart.

The chart on page 415 shows the cumulative data. This chart is a little more difficult to interpret because the data are recorded on a much smaller scale and the fluctuations on the chart are, therefore, much smaller. It will be noted also that the lines on this chart do not at any time turn downward but rise each month. The reason for this is that the

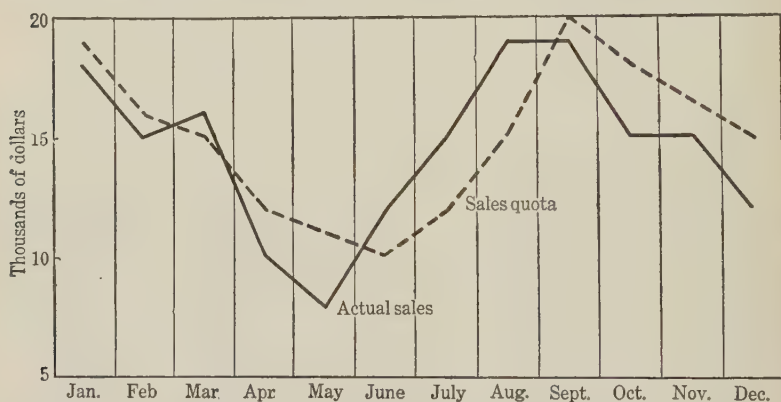


Figure 7.—SALES OF J. W. MATTINGLY COMPARE WITH SALES QUOTA

sales and the quota of each month are added to the figures for the preceding month. If sales are small, the result is merely that the line on the chart does not rise as rapidly as in other months. A large volume of sales in any month is reflected in this chart by an increased steepness of the sales curve. These two charts should be interpreted together, and a table showing the figures for the sales and the sales quota should also be available to the sales manager at all times.

In all the charts thus far presented in this chapter, the months were represented by spaces on the chart rather than

by lines. The reason for this is that the data are totals for the month and not the amount at any one time. If a chart were made of the cash balance or of the value of the inventory, the month would be represented by a line on the chart and not by space.

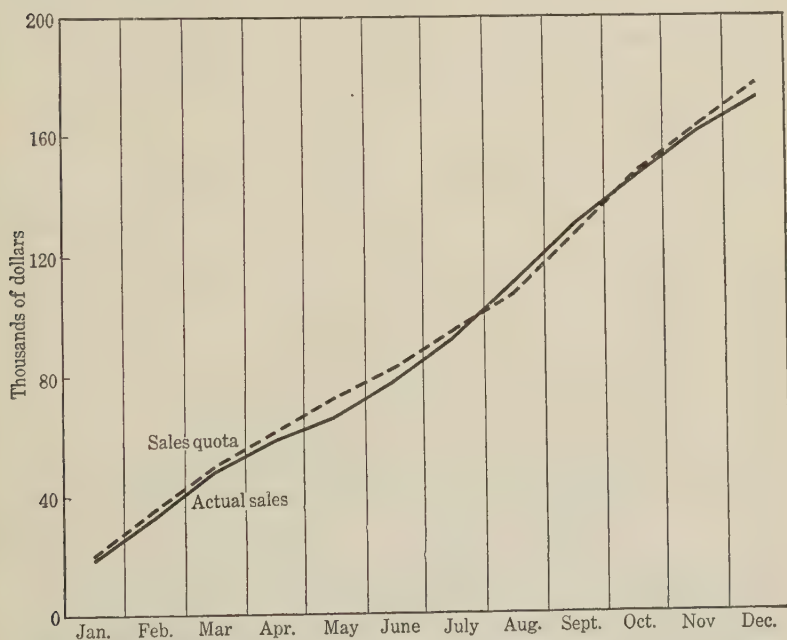


Figure 8.—CUMULATIVE SALES AND SALES QUOTA, J. W. MATTINGLY

Sales may be classified by method of delivery.—In a wholesale or a manufacturing business, goods may be delivered by parcels post, express, or freight. In a retail business, the usual methods of delivery are by the delivery trucks of the business or by handing the goods to the customer directly. Some goods are delivered by express and by parcels post. An analysis of the sales by method of de-

livery is desirable in order that the management may know how much each department of the business is making use of the delivery service and, therefore, how much delivery expense is incurred for each department. If the management is to know whether, for example the furniture department is more profitable to them than the china department, it must know the cost of making deliveries for each department. A classification of sales by method of delivery enables the

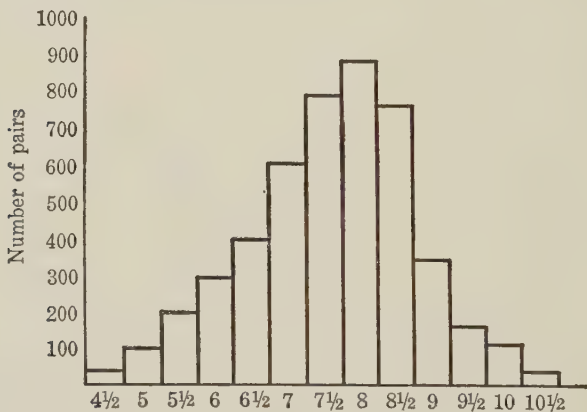


Figure 9.—SALES OF SHOES BY SIZES

management to allocate the expenses of the delivery department to the selling departments of the business. The information obtained from this classification is of use also in preparing for the increased number of deliveries to be made during rush periods or busy seasons of the year.

It is not necessary that sales be classified every month by method of delivery, for the percentages will not vary much from month to month. An analysis may be made for a period of time that is long enough to be representative of the general average of the business, and then checked up by additional analyses from time to time. This method of

judging a mass of data by a part of it which is believed to be representative of the whole is known as *sampling*.

The sales of some kinds of goods may be classified by sizes.—This is true, for example, of articles of clothing. Information relative to sales by sizes is necessary in order that the management may know what to buy in the case of the mercantile concern or what to manufacture in the case of the manufacturing concern. A similar problem arises in commodities which are sold in a number of varieties, such as canned soup. The data may be arranged by a diagram similar to that shown on page 416. This diagram, which is merely a series of rectangles of different heights, is known as a *histogram*.

Only one classification of sales can be recorded in the ledger.—Each of the classifications of sales which has been discussed is important for certain purposes. Only one of these classifications can be used in the ledger, however. For example, if a cash sale is made by salesman No. 4 in Department A and a classification of sales by departments is desired, an entry is made debiting Cash and crediting Sales of Department A. It would not be possible at the same time to record a credit to Cash Sales or to the sales of salesman No. 4. If a classification of sales by departments and by terms of sale and by sales persons is desired, one classification must be kept in the ledger and other classifications may be obtained by separate tabulations or analyses which are not a part of the regular system of accounts. Each business must decide which classification of sales is most important, and it is this classification which will be kept in the ledger. From the sales tickets or sales invoices, as many additional classifications may be made as are desired.

Sales returns and sales allowances should be analyzed.—Sales returns and allowances should be classified in the same

manner that sales are classified. Practically all concerns have some goods returned to them by their customers, and allowances must occasionally be made to customers for goods which are not satisfactory. If the sales have been classified by commodities such as hardware, farm implements, and engines, then the sales returns and allowances, classified in the same way, will be deducted from the account to which they were originally added. Thus the accounts will show the correct amount of net sales of each class.

Careful examination should be made of sales returns or allowances in order to prevent unjust claims, and in order to determine the cause of the dissatisfaction of the customer. Some concerns have special departments which handle the claims of dissatisfied customers, but more often this service is performed by the sales department itself. The validity of the claim is determined by investigation. This may involve a checking of the sales invoice and the quoted price to ascertain if there has been an overcharge; a comparison of the goods shipped with the sample, to learn if the materials were inferior in quality; an investigation of packing and shipping to see why the goods reached their destination in damaged condition. Although the validity of the claim is always investigated, many firms are very lenient in allowing claims of customers because they are anxious to retain the goodwill of the customer.

It is important not only to determine the validity of the claim, but it is equally important to determine the cause of the claim in order to fix responsibility and to reduce the claims to a minimum. A record showing analysis of claims by causes should be maintained. The various causes of claims can then be tabulated to determine the amount of the claims due to each cause.

To determine whether sales returns and allowances are being satisfactorily controlled, each group should be stated both in absolute amounts and in percentage of sales. The percentages each year are always compared with the corresponding figures for the preceding year.

The ratio of selling expense to net sales is an index of the efficiency of the sales department.—This ratio is computed from the information contained in the statement of income and expense. The ratio of each kind of selling expense to net sales is also computed. Some of the selling expenses, such as commissions of salesmen, vary directly with sales. Other expenses, such as sales office expense, vary somewhat but not in proportion to changes in sales.

QUESTIONS FOR DISCUSSION

1. What necessity do you see for sales analyses? What is the relationship between sales analyses and the accounting records?
2. Give examples of sales analyzed by commodities. By departments. By selling units. In what other ways may sales be classified? Give examples.
3. What advantages do you see in analyzing sales returns and allowances in the same way that sales are analyzed?
4. Name and describe the various kinds of sales classified by terms of sale.
5. Explain how cash sales are entered and posted when a classification of sales is desired.
6. Explain the entries involved when a sale on consignment is made.
7. Are sales budgets and sales quotas of much assistance in directing sales? Explain and give examples.
8. Explain the relationship that is desirable between sales and production. Between sales and purchasing.
9. Is the information respecting sales desired by the president of a company any different from that desired by the sales manager?
10. Where should the person in charge of advertising be placed in a business organization? Should he be responsible directly to the general manager, or to the manager in charge of marketing?

PROBLEMS

1. Draw a detailed organization chart for the marketing department of a large business.

2. The Gibson Department Store has twelve departments including a grocery and jewelry store. There is considerable indecision among the executives as to what kinds of goods the establishment should handle. Several alternatives are open to them:

- (1) All departments handle high price goods.
- (2) All departments handle low price goods.
- (3) All departments handle medium price goods.
- (4) Some departments handle high, others low, and still others medium price goods.
- (5) Each department should handle each kind of goods.

Write a report to the president of the Company stating the advantages or disadvantages in each alternative offered. Finally, what specific recommendation do you make?

3. The statistical division of the New Breakfast Food Company classified the sales of the company by territories and found the sales to be as follows:

Year	Territory Number			
	1	2	3	4
1919	20,350	15,120	18,700	9,780
1920	29,600	18,210	22,650	13,150
1921	30,200	16,430	23,180	15,500
1922	15,700	10,140	14,890	13,670
1923	22,750	12,500	18,950	17,115
1924	24,980	13,650	21,100	20,500
1925	21,500	12,600	20,900	19,650
1926	21,350	12,400	22,300	23,400
1927	28,500	12,400	20,150	26,300
1928	34,750	12,560	17,550	29,100
1929	32,950	13,400	15,430	31,670

- (1) Draw a chart showing the fluctuation of sales in the four territories.
- (2) Write a report pointing out the difference in the fluctuation of sales in the four territories and explaining the possible causes. State what further investigation or information will be necessary before a conclusion is drawn as to the causes.

4. The Royal Manufacturing Company, manufactures five products which are distributed through five branches throughout the country. The central office is in Chicago. This office desires the following information:

- (1) Total sales of each product by all branches.
- (2) Total sales of each branch of all products.
- (3) Sales of each product by each branch.

Write a report to the general manager setting forth the accounts which must be kept to supply these data, and the reports which must be used to give the information.

REFERENCES FOR FURTHER STUDY

- THE MANAGER'S ADMINISTRATION OF MARKETING: Marshall and Wiese, *Modern Business*, pp. 263-293
- THE SALES DEPARTMENT: White, *Business Management, an Introduction to Business*, pp. 588-609
- THE BUSINESS MAN'S TASK OF SELLING GOODS: Lyon, *Making a Living*, pp. 229-237
- RECORDS AND REPORTS FOR THE SALES DEPARTMENT: McKinsey, *Book-keeping and Accounting*, pp. 838-846

CHAPTER XXV

THE USE OF INFORMATION IN PRODUCTION

PURPOSES OF THIS CHAPTER

1. To show what information is needed by the production manager
 2. To explain the method of finding the costs of production
-

A manufacturing concern is engaged in the production of goods, that is, it purchases raw materials, and, by the application of labor, converts them into finished goods which are sold to customers. It operates in order to make the largest possible amount of profits, and, therefore, it must produce satisfactory goods and, at the same time, manufacture at the lowest cost in materials, labor, and other expenses. It is very important that the business manager exercise constant and careful supervision over the manufacturing processes because manufacturing costs constitute a large percentage of the total costs of the business.

The department in charge of manufacturing is known as the production department.—While the duties of a production department depend, in a large measure, upon the size of the business and upon the nature of the goods being manufactured, the activities of production departments are usually very much the same. The department must determine the kind and quality of goods to be produced, the amounts of material and supplies needed, and the amount and grades of labor necessary. It must supply the equipment, look after the receiving and storing of raw materials,

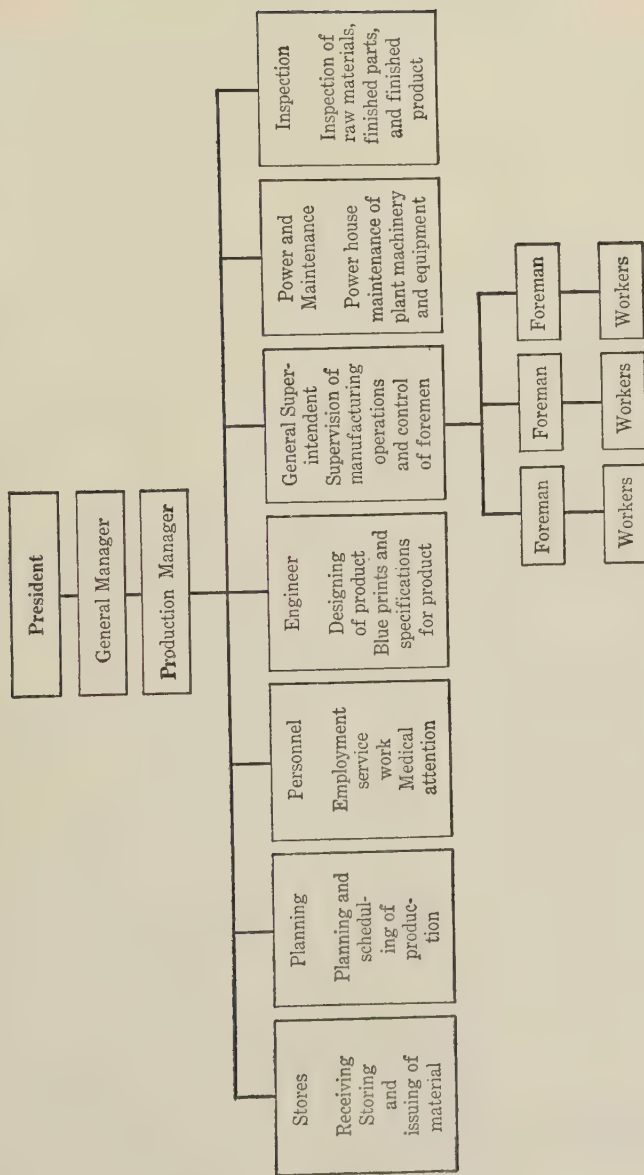


Figure 10.—ORGANIZATION OF PRODUCTION DEPARTMENT

and, in general, supervise the performance of manufacturing operations.

Possible divisions of the production department are illustrated in the chart on page 423 and the duties of each division are indicated. Large manufacturing companies may break up some of the divisions and delegate a part of the duties to an additional department or division. Small manufacturing companies will have fewer divisions, the duties of two or more of the divisions indicated being given to a single subordinate executive.

The production department is usually responsible for a large percentage of the expenditures of the company. Careful check must, therefore, be kept on all its activities, and the production manager and the general manager must be informed at all times regarding conditions in the plant. Records of manufacturing operations must be kept and reports must be compiled showing the amounts of raw materials of each type on hand, the progress made on each order of goods being manufactured, and other details of production. The various records and reports must be considered in detail. The first of the records to be explained is that of raw materials on hand.

Inventories must be kept at the proper amount.—It is very important that both the inventory of finished goods and the inventory of raw materials be kept as low as the needs of the business will permit. A large inventory results in an unnecessarily large investment of capital and, therefore, in a loss of interest. The inventory requires storage space which is expensive. The risk of a decline in prices must also be considered when the inventory is large. There is, in some cases, the risk of a change in style or design, which might cause loss to the company. On the other hand, the inventory of raw materials must not be allowed to get so

low that production is delayed because of a lack of material. An adequate supply of each of the necessary materials must be available when needed. The inventory of finished goods must not be allowed to get so low that shipments to customers are delayed. In short, the inventory must be just large enough but not too large.

The record used in keeping inventories at the proper amount is the balance of stores record.—The balance of stores record may be used for both the inventory of raw materials and the inventory of finished goods. This record makes it possible to keep a perpetual inventory of every item used in the process of manufacture and of every item of finished goods.

The record may be kept in a variety of ways, but it should contain, at least, the information shown in the form as illustrated.

BALANCE OF STORES						
Name of item <u>Screws, 1¼ in.</u>				Maximum 25,000		
Location in Storeroom <u>Aisle 4, Row 3, Bin 6</u>				Minimum 15,000		
Source of Supply <u>American Steel Co.</u>				Quantity to order 10,000		
Date	Ordered	Received	Issued	Balance on Hand	Applied	Available or Shortage
1 — 1	10,000		8,000	25,000	8,000	25,000
1 — 5				17,000		17,000
1 — 10					4,000	13,000
1 — 20					1,000	12,000
1 — 20			4,000 1,000	13,000		
1 — 25				12,000		
1 — 28				22,000		
1 — 28						22,000
2 —		10,000				

The balance of stores record shows the changes in the inventory of one item of raw materials. The record should

be studied carefully to see the method of operation. First of all, it should be noted that the numbers denote quantities and not values. It is always necessary to record the quantities, though the record of values is frequently kept also. This is done by adding more columns, but the record becomes more complicated because the price of the various purchases is usually not the same. The record shown indicates that the inventory on January 1 was 25,000. This figure is shown in the "balance on hand" column, and since it also is the amount available for use it is carried to the last column. On January 5, an order is received by the factory which will require 8,000 items of this particular material for manufacture. This quantity is reserved for the order by entering the amount in the "applied" column and deducting it from the amount which had previously been available. It is not deducted from the balance on hand because it has not yet been issued from the storeroom. Five days later the 8,000 which had been reserved are issued to the factory for use, and on that date the 8,000 are recorded as issued, and are deducted from the balance on hand. On January 20, the supply begins to run low and a purchase order is placed for 10,000 more. Record of this order is made in the "ordered" column, but the quantity ordered is not added to either the balance on hand or the amount available. The materials purchased are received on February 1, and record is made in the "received" column, and the quantity is added to the balance on hand and the amount available.

The "applied" column allows the first order to have precedence, as it should. The deduction of the "applied" from the "balance on hand" indicates the amount "available" for future orders. If a minimum has been established for the item, it is possible to determine when that limit has been reached and to place a new order before the supply is en-

tirely exhausted. If more is called for than is available, the difference may be entered in ink of some other color.

By the use of the balance of stores record, it is possible to maintain a record of the quantity of each item in stock at all times. The value of the total inventory on hand at any time may, therefore, be determined from this book inventory without a great deal of labor. It must be understood, however, that a physical count of the goods must occasionally be taken. Errors will be made in the inventory records, and mistakes will be made in the storeroom in counting or weighing the materials. The book inventory of each item must, therefore, be verified by an actual count of the materials on hand at least twice a year. The advantage of the perpetual inventory is that this verification need not be made for all items at the same time but may be made in an orderly manner by periodically making the rounds of the storeroom. The verification of the book inventory may be made by one or two employees who do nothing else and who are likely to do a much better job than is usually the case when the entire inventory is taken at one time.

The balance of stores record for finished goods is kept in the same way that the record of raw materials is kept, except that when the supply runs low an order is issued to the factory for the manufacture of an additional quantity instead of a purchase order being issued.

The establishment of the minimum and the quantity to order for each item aids in maintaining inventories at the proper amounts.—A definite point should be established as the lowest to which the supply of each item should be allowed to go; and when the inventory reaches this figure, the placing of the purchase order is merely a routine matter. The point at which the order for more material is placed is called the *minimum*. It is also possible to determine in ad-

vance the proper amount to purchase, or in the case of finished goods, the economical quantity to manufacture. This amount is called the *quantity to order*. The establishment of the quantity to order makes the placing of the purchase order or the factory order very easy, for the quantity is determined in advance by a careful consideration of market and other conditions, the figure being changed only when conditions require it. The minimum plus the quantity to order equals the *maximum*, which is the highest figure that the inventory should ever reach. The minimum, the maximum, and the quantity to order, are shown on the balance of stores record for each item, and each time an entry is made on the record, the quantity available is compared with the minimum. When this quantity reaches the minimum, notification is made to the purchasing department or the factory, depending upon whether the item is raw materials or finished goods. The keeping of the inventory at the proper amount is thus greatly simplified.

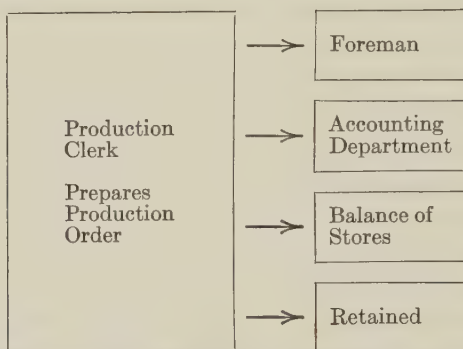
The establishment of maxima and minima is not an easy matter, and no single formula can be given for fixing them. In the case of raw materials, the limits are established on the basis of the period of time required to receive an additional supply after the order is placed, the quantity likely to be needed in manufacture during that period, the transportation charges on large and small shipments, and the possibility of securing better terms if large quantities are ordered. It is also necessary to consider whether the vendor carries the materials in stock or is required to manufacture the goods to fill each order. If he manufactures to order and not for stock, it is necessary to consider the economical quantity for him to manufacture since his price is probably higher on the small quantities. In the case of finished goods, the limits are established on the basis of the period of

time required to manufacture, the quantity likely to be needed during the production period, and the economical quantity to manufacture. The economical quantity to manufacture means simply that it is expensive to adjust machines and do the clerical labor necessary for a factory order; and, if the number of units of goods manufactured is small, the cost per unit is unnecessarily high. The advantages of keeping the inventory at a small figure must be balanced against the disadvantages of the issuing of numerous small orders to the factory for production and the increasing of manufacturing costs.

It is necessary to provide a margin of safety in the establishment of the limits of the inventory. The number of items which will be sold during the production period, or the amount of raw material needed by the factory during the purchase period, cannot be determined exactly. The production period may be lengthened at times because of breakdowns in the factory or for other reasons. The purchase period may also be increased at times. In the case of finished goods, the minima may be fixed at the margin of safety plus the economical quantity to manufacture or the needs during the production period, whichever is the greater. The minimum for raw materials may be fixed at the margin of safety plus the economical quantity to purchase or the probable needs of the purchase period, whichever is the greater.

When an additional supply of finished goods is needed, a production order is issued to the factory.—The factory produces goods only when properly authorized by means of a production order. This production order is issued by the planning department upon receipt of notice from the balance of stores clerk that the supply on hand has reached the minimum. The production order shows the quantity and

description of the article, and the date wanted. Several copies are made and distributed in the following manner:



The first copy gives notification to the foreman of the department in which the goods are to be manufactured that he is to begin work. The accounting department needs a copy so that it can figure the costs as the order goes through the factory; the balance of stores must also have a copy so that it will know that the order has been issued. The production clerk retains a copy for his own records. The production order is given a number which is used to identify the order in all records.

When the order is issued, a bill of materials is prepared by the planning department, setting forth the kinds of materials which will be needed to manufacture the goods called for. This is sent to the clerk who has charge of the records of inventories, and, on his balance of stores records in respect to each article, he reserves the amounts called for in the "applied" column. This arrangement permits the various departments engaged in production to leave the raw materials in the storeroom until they need them in the course of the productive process. The bill of material assures them that the materials have been set aside for their use.

Cost accounting is an important aid in the administration of factory production.—The method of keeping factory accounts, which was discussed in Chapter XX, permits the management to know the total cost of manufacture and the total profit on goods sold. This system is very good for some purposes, but it does not give enough information to permit the management to administer the operations of the factory efficiently. The general or financial system of accounting is frequently replaced by a more complete system of accounting known as *cost accounting*. A cost accounting system makes it possible to determine not merely the total manufacturing cost but also the cost of each order and of each item of goods manufactured. By means of this system, the materials issued for each order of goods, the costs of direct labor on it, and the manufacturing expenses incurred in connection with it are charged directly to the order. Thus the total costs are determined, and the cost per unit may be determined by dividing the total cost by the number of items manufactured. The essential facts of the cost system will be explained.

We have learned that manufacturing costs are composed of three elements, namely, materials, direct labor, and manufacturing expenses. Materials and direct labor are often called prime costs because they can be identified with a particular order of goods. Manufacturing expense includes all the costs of operating the plant which cannot be shown to have been incurred in connection with any particular order. These elements of cost should be distinguished for purposes of general or financial accounting, but the distinction becomes much more important for purposes of cost accounting.

The distinction between the three elements of manufacturing cost may be more clear if one thinks of the processes of

manufacture. The manufacture of goods requires, first of all, the raw materials which are worked upon; second, a workman to perform the necessary labor; and third, a place for the worker to do his work. The provision of the place and the machine at which the worker may work requires, first of all, an expenditure for the machine, and this means expense for depreciation and taxes on the machine and cost of power to run it. Further expenses are incurred in keeping the machine in repair. The machine must be located in a building which must be kept warm and comfortable in winter and which must be lighted at certain hours of the day. Other expenses are incurred by the management in maintaining a steady flow of orders through the plant, such as the expense of the planning department. It can readily be seen, however, that all these manufacturing expenses are of the same general nature in that all of them are incurred in order to provide the worker with a suitable place to work and to keep him supplied with a new job as soon as he has finished his work on any one order. Therefore, all these expenses may be grouped under one head as manufacturing expense and considered as the cost of maintaining the workplace and the proper manufacturing conditions. Manufacturing expenses are a proper charge against each individual order though the proper amount to charge is not always easy to determine.

The various costs of the order are assembled on a record called the *cost sheet*, one sheet being used to record the costs of each order.

Materials and labor are charged directly to the production order.—The first cost to be incurred is that for materials. The foreman of the department, who is to begin work on the order, has received the production order from the production clerk. He then fills out a materials requisition, containing

such information as the date, amount wanted, a description of the material, and the number of the order to which the materials are to be charged. The foreman retains one copy of the materials requisition and sends the other to the raw materials store room. The requisition is filled by the storekeeper and the materials are delivered. The requisitions

COST SHEET			
Description of Item.....		Order Number.....	
Date of Issue of Order.....		Date Wanted.....	
Number of Units.....		Date Completed.....	
Material	Cost per Item	Total	Manufacturing Expense
Item..... Req. No.....	.....	.....	Dept..... hours @
Item..... Req. No.....	.....	.....	Dept..... hours @
Item..... Req. No.....	.....	.....	Dept..... hours @
Total Material		.....	Total Expense
Labor	Total		
.....hours @ .....	.....	Total Material	
.....hours @ .....	.....	Total Labor	
.....hours @ .....	.....	Total Expense	
Total Labor	.....	Total Cost	
		Cost per unit	

are forwarded to the balance of stores clerk in the planning department and recorded in the "issued" column of the balance of stores records. The requisitions are then sent to the cost accounting department, where the cost of the materials issued is entered in the proper section of the cost sheet as a cost of the production order for which the material was issued.

In order that the labor cost may be correctly determined, a record must be kept of the time which each workman spends upon the order. This is done by means of time

tickets, which show the time at which the worker began work upon the production order and the time at which he finished.

STORES REQUISITION			
Debit			
Production Order No. _____		Date _____	
Credit			
Material Account No. _____		Requisition No. _____	
Delivery to _____			
Quantity	Description of Material	Cost per unit	Total Cost
Received by _____			

MATERIALS REQUISITION

The number of the production order is also recorded on the time ticket. These time tickets go to the cost accounting section where the rate per hour to which the worker is entitled is entered. The total labor cost is computed from

TIME REPORT	
Date _____	Order _____
Number of workman _____	Name of workman _____
Description of job _____	
Time started _____	Number of articles made _____
Time stopped _____	Price per piece or hour _____
Time elapsed _____	Total wages _____
O. K. _____	
Foreman	

TIME TICKET

these time tickets and entered in the proper section of the cost sheet.

The most difficult part of cost accounting is the apportionment of manufacturing expense.—Manufacturing expense cannot be charged to the order in the same way that direct materials and direct labor are charged. Such expenses as depreciation, taxes, insurance, and repairs to building, are incurred for the sake of the entire manufacturing process and not for any one order. The same is true of the salary paid to the night watchman, cost of cleaning, depreciation on machinery, salary of foremen, and other manufacturing expenses. It is, therefore, necessary to find some method by which the manufacturing expense can be apportioned or distributed over the various orders. The methods of distributing manufacturing expense, which are most frequently used, are the percentage of labor cost rate, the labor hour rate, and the production center rate.

The *percentage of labor cost rate* was the first method developed for the distribution of manufacturing expense, and it is still one of the most widely used systems. The procedure is as follows:

1. Determine the total manufacturing expense for the period,
2. Determine the total labor cost on all orders for the period,
3. Determine the relationship between the total manufacturing expense and the total labor cost, and,
4. Apply this relationship to the production order in question.

Thus, suppose that the total manufacturing expense for one year is \$60,000, and the total cost of labor for the same period is \$120,000. Manufacturing expense is, therefore, 50 per cent of the cost of labor. Suppose, further, that the total cost of labor on production order No. 45 is \$1,800. Fifty per cent of this or \$900 should be added to production

order No. 45, as manufacturing expense. The total cost of this order will then be as follows:

Cost of production order No. 45.

1. Materials	\$1,500
2. Labor	1,800
3. Manufacturing Expenses	900
	\$4,200

The percentage of labor cost method has been found quite satisfactory in a plant where just one product is manufactured. It is sufficiently accurate when all workmen receive fairly uniform wages. If this is not the case, some other method of distributing manufacturing expenses must be used.

The *labor hour rate* apportions manufacturing expense on the basis of the time spent on the order. The process is as follows:

1. Determine the total manufacturing expenses,
2. Determine the total number of hours for all workmen who are employed,
3. Divide 1 by 2 to get the hourly rate,
4. Determine the total number of hours employed on a certain order, and,
5. Multiply 4 by 3 to obtain the manufacturing expense to be charged to the order.

Thus, suppose that the total manufacturing expense for the year is \$7,200, and the total number of hours for all workmen for the same period is 36,000. The manufacturing expense is, therefore, twenty cents per labor hour. If the total number of hours expended on an order is 1,000, the manufacturing expense to be charged to the order is 20 times 1,000, or \$200.

The success of this method of distributing manufacturing expense depends largely upon whether or not the equipment

used is fairly uniform in original cost and in cost of operation. If the operation of one machine for an hour costs about the same as the operation of another, and if the same number of workmen are required at each machine, this method is satisfactory, since then each commodity will bear its fair share of the manufacturing expenses.

The *production center rate* or *machine hour rate* of distributing manufacturing expense is more accurate but it is used less than the other methods because it is somewhat more complicated. This method attempts to find the cost of maintaining and operating each machine or each workplace in the plant for one hour, and then to distribute to each production order worked on at that machine or that workplace the cost of maintaining it. The significance of the term production center is that some workplaces in the plant are not machines but may be merely benches or tables where work is done, or, in some cases, merely open spaces on the floor where parts are assembled to form the finished product.

The method of charging to each order the proper share of manufacturing expense according to the production center method is to distribute the various expenses to the machines or workplaces in the plant. The amount of certain types of expenses incurred for the particular machine can be accurately determined, while other expenses can merely be apportioned to the various machines by means of estimates. Some of the expenses which can be shown to have been incurred for a particular machine are depreciation on machinery, taxes and insurance on machinery, repairs to machinery, and power. Expenses which can be allocated to machines only by estimate are depreciation and taxes on the building, repairs to building, costs of maintaining hallways and stairways, wages of night watchman, salary of

foreman, and heat and light. The handling of manufacturing expenses is very largely based upon estimates.

The method of apportioning manufacturing expenses to production orders may now be summarized. It must be understood that this calculation is made only for the purpose of determining the amount of manufacturing expense to enter in the cost sheet as a charge to the particular order.

1. Determine the expenses of each department,
2. Apportion the expenses of the department to production centers of the department,
3. Determine the number of hours the center is operated,
4. Divide 2 by 3. This gives the hourly expense charge for operating the center,
5. Determine the number of hours spent on each order in each center, and,
6. Charge the production order with its share of the expense of the center.

Thus: the weekly expense cost of a certain production center is \$100, and the center operates 50 hours during the week, so that the hourly expense charge is \$2. If ten hours are spent on an order at that center, the order should be charged \$20 for manufacturing expense.

Entries must be made in the general accounts to record all cost transactions.—The records of cost transactions explained in the preceding paragraphs are made on the cost sheets. General ledger entries are also made to record all the transactions. The entries which should be made in the general system of accounts will now be illustrated. These entries are not recorded in the general journal though they are illustrated in the form of journal entries. Special books of original entry are used, the postings being done in total at the end of the month.

When materials are purchased:

Materials	\$2,500.00	
Accounts Payable		\$2,500.00
To record materials purchased.		

When materials are transferred from the storeroom to the factory:

Materials in process	\$500.00	
Materials		\$500.00
Issue of materials to be used on order number 35.		

When labor has been expended upon an order:

Labor in process	\$200.00	
Cash (or Wages Accrued)		\$200.00
To record labor charges on order number 35.		

When manufacturing expense is incurred:

Manufacturing Expense		
Accounts Payable, or		
Reserve for Depreciation on Machinery, or		
Reserve for Depreciation on Building, or		
Prepaid Insurance, or		
Taxes Accrued, etc.		
To record manufacturing expenses incurred.		

When the order is completed and transferred from the factory to the finished goods storeroom:

Finished goods	\$750.00	
Materials in Process		\$500.00
Labor in Process		200.00
Manufacturing Expenses		50.00
To record completion of production order No. 35, the amount of manufacturing expense applied on this order being \$50.		

When the finished goods are sold, two entries are made:

Cost of sales	\$750.00	
Finished goods		\$750.00
To record cost of goods sold.		
Accounts Receivable, Frank Smith	1,200.00	
Sales		1,200.00
Sales on account to Frank Smith.		

The new accounts introduced in these entries given above must now be explained. The Materials account is a perpetual inventory account, showing at all times the value of the materials on hand. When materials are purchased, this account is debited and the individual items of materials are entered in the balance of stores record for raw materials. When materials are issued from the storeroom, the Materials account is credited and the issues are entered in the balance of stores record. The Materials account is thus a controlling account for the balance of stores record. The debit for the issue of materials is to Materials in Process. The amount is also entered on the cost sheet for the particular production order. When the production order is completed, Materials in Process is credited, and the cost sheet is taken out of the "In Process" file and placed in the completed file. The Materials in Process account is thus a controlling account, the subsidiary record being the materials section of the cost sheets. Labor in Process is handled in a similar manner, this account being a controlling account for the labor charges entered on the cost sheets. Manufacturing expense is handled in a slightly different way. In the illustration given, Manufacturing Expense is debited and any one of a number of accounts is credited. When the entry is made for depreciation on the factory building, Manufacturing Expense is debited and Reserve for Depreciation on Building is credited. When entry is made to adjust the Prepaid Insurance account, Manufacturing Expense is debited and Prepaid Insurance is credited. In the same way the credit may be made to any one of several other accounts according to the nature of the expense.

When the production order is completed, the amount of manufacturing expense to be charged on it is computed and entry is made as indicated in the illustrative entries.

Manufacturing Expense is credited for the amount of expense apportioned to the order. This amount is transferred to the Finished goods account as a debit. The Cost of Goods Sold account shows the total cost of goods sold during

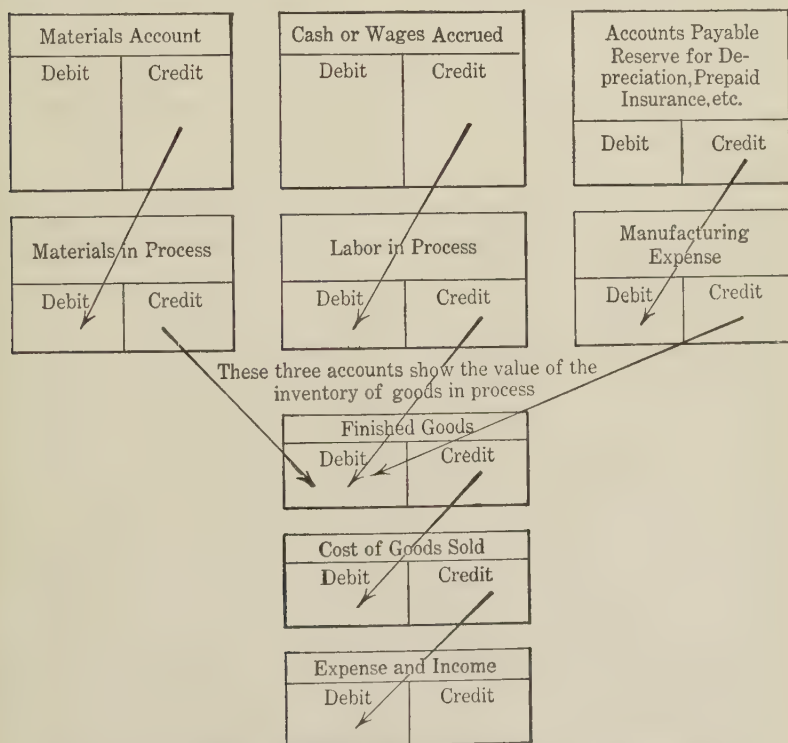


Figure 11.—GENERAL LEDGER ACCOUNTS UNDER A COST SYSTEM

the period, and the balance of this account is transferred to Expense and Income at the end of the accounting period. The Sales are also transferred to Expense and Income; and if there is any balance in the Manufacturing Expense account which has not been charged to production orders

completed or which is not properly chargeable to production orders still in process in the factory, this balance is also transferred to Expense and Income.

It should be observed that the manufacturing expenses are not shown separately in the accounts when there is a cost system, but these expenses are entered in a single account. If an analysis of these expenses is desired, as is usually the case, it must be prepared on analysis cards which do not form a part of the general ledger accounts. The statement of income and expense showing the material consumed, the cost of labor, and the various manufacturing expenses can be prepared only by analyzing the entries in the Materials in Process account, the Labor in Process account and the analysis cards. It will be observed also that the cost of goods sold is determined during the period and not at the close of the period. Only two items would appear in the Expense and Income account as showing the manufacturing operations. These are the Cost of Goods Sold and the Manufacturing Expense not applied on orders. Of course, some slight discrepancy between the manufacturing expenses actually incurred and the manufacturing expense applied on orders, may be expected. It would not be possible to secure complete agreement between these two without waiting until the end of the period and at that time making entries on all orders completed during the period. The objection to doing this is that the information would be obtained too late for purposes of business administration. The expense is estimated in advance and any difference between the estimated and the actual expenses is closed into Expense and Income.

As previously explained, the manufacturing concern has three merchandise inventories, namely, raw materials, goods in process, and finished goods. If the company has a cost

system, all three of the inventory accounts are perpetual inventory accounts, and it is possible to determine the value of each inventory at any time. The amount of the materials inventory and the finished goods inventory can be obtained directly from the accounts. The value of the goods in process inventory is shown in three accounts, the Materials in Process account, the Labor in Process account, and the Manufacturing Expense account. To determine the value of the work in process inventory at any time it is necessary to apply to the orders of goods in process the amount of manufacturing expense which has been incurred on them to date and to add the charges for labor and materials. In some cases, one account, called Goods in Process, is kept in place of the three in-process accounts shown here. The use of one account requires a little less work but does not show the information that three accounts show. If three accounts are kept, it is also easier to locate errors, since by comparing the balance of these accounts with the total materials, labor, and manufacturing expense charged on the cost sheets for work in process, it is possible to determine whether the error is in the entries for materials, labor, or manufacturing expense.

The information obtained from cost records is of great value in business administration.—Many people believe that a knowledge of the cost of goods is valuable to the manufacturer solely or mainly for purposes of fixing the price at which the goods will be sold. However, prices are determined by conditions in the market and in most cases are not within the control of the individual business. The business man must meet market prices if he is to remain in business. In some cases, the market demand may permit the manufacturer to charge a price far in excess of the cost of production; and, where the consumer is primarily con-

cerned with quality, the manufacturer may even sell a greater quantity of goods at a high price than he could sell at a lower price because the consumer would be afraid to buy a low priced article. A knowledge of costs enables the manufacturer to know the lowest price at which he can sell and still make a profit; and if buyers require bids as some large buyers do, cost records may be an aid in determining the price which should be bid on such a contract. The executive is also informed as to the lines on which he is making the greatest profit, and an attempt can be made to increase the sales on the profitable lines. The unprofitable lines may be discontinued. The greatest value of the cost records, however, is their value in giving information by means of which waste in the process of manufacture may be prevented.

As soon as a production order is completed, the costs on that order are determined. The executives compare the costs of the various orders, and they know at once if the cost of an order is greater than it should be. Each day, the executives meet to discuss the reports on orders completed the day before; and if the cost of any order appears to be too high, an investigation is made. If material has been spoiled in the process of production, or if too much time of workmen has been spent upon the order, or if the order remained at a machine longer than was necessary, or if for any other reason the cost was too great, the cause is discovered and measures are taken to secure better results on future orders. Likewise if costs on an order are low, the reason is found and an attempt is made to bring down the costs of other orders. The cost of idle time of machinery and equipment is also determined, and if this can be reduced in any way, an attempt is made to do so.

To illustrate the use of cost data, the table on page 445 is

given, showing the cost per unit of product according to the number of units in each batch manufactured. Up to a certain point, as the table and the chart show, the larger the number of units in the batch, the lower is the average cost. The variation in cost is best illustrated in the chart on page 446. By reference to such data as those shown in the table and the chart, it is possible to determine as each production order is completed whether the cost is low or high.

COST PER UNIT OF PRODUCT ACCORDING TO THE NUMBER OF UNITS IN EACH BATCH MANUFACTURED

NUMBER OF UNITS IN THE BATCH						
	25	50	75	100	125	150
Cost per unit	3.40	3.35	3.20	3.25	3.10	2.85
	3.25	3.10	3.10	3.05	2.90	2.70
	3.00	2.90	2.95	2.90	2.80	2.65
	3.00	2.90	2.75	2.80	2.70	
	2.90	2.90	2.70	2.60	2.65	
	2.75	2.75	2.60	2.60	2.65	
		2.60	2.50	2.55	2.55	
		2.50		2.50	2.50	
Average	3.05	2.87	2.83	2.78	2.73	2.73

Much additional information is needed in production.—Information relative to the costs of production is not the only type of information which is needed in the administration of production. The president and other executives should be supplied with such information as a monthly comparative summary of orders, shipments, production, unfilled orders, and the increases or decreases of inventory.

The manager in charge of production should be supplied with reports containing the following information:

1. Orders received, shipments made and unfilled orders.
2. The amount of production.
3. The cost of operation of the plant as a whole.

4. The cost of operation of each department of the plant.
5. Investment in factory inventories.
6. Status of active expense appropriations.

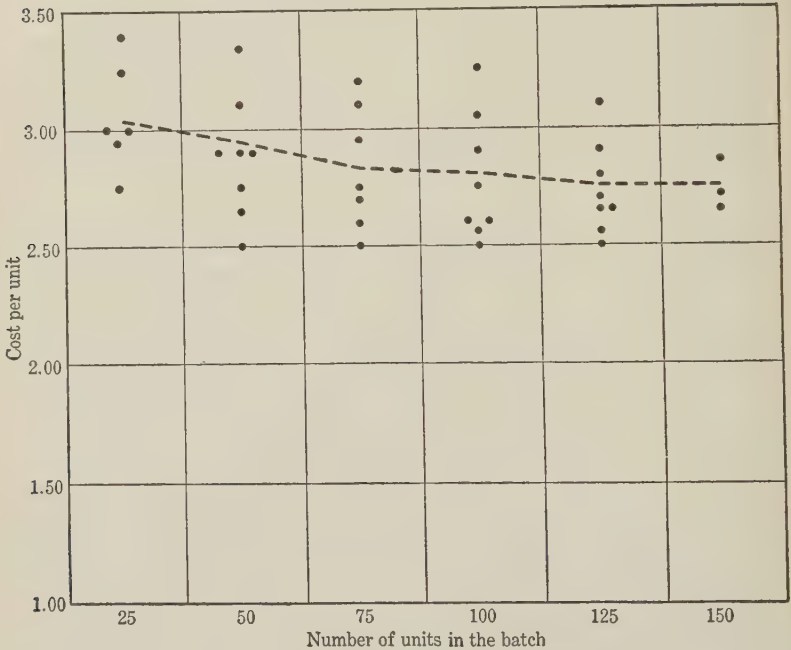


Figure 12.—COST PER UNIT ACCORDING TO NUMBER OF UNITS

The statement of income and expense contains much information of value to the production manager.—The manager is especially interested in knowing the total of each kind of manufacturing expense, the cost of material consumed, and the cost of direct labor. Each element of cost is stated in absolute amounts and also as a percentage of the total. These data, when compared with similar data for the preceding year, enable the manager to determine which costs are out of line and require further measures of control.

The ratio of the work in process inventory to the total manufacturing cost is another check upon the efficiency of factory operation. It shows whether or not goods are moving through the plant in an orderly manner. Another ratio of similar nature is that of the average of all inventories to the cost of goods sold. This ratio is known as inventory turnover. An increase in turnover is very favorable because it indicates that the company is doing more business per dollar invested in inventories.

QUESTIONS FOR DISCUSSION

1. Explain or define:

- (a) Balance of stores.
- (b) Direct charges.
- (c) Overhead charges.
- (d) Labor percentage rate.
- (e) Labor hour rate.
- (f) Production center method.
- (g) Production order.

2. How do you account for the rapid increase in interest in the administration of production within recent years? Might the change in the method of meeting market demands have something to do with it?

3. Explain how the production department has immediate control over inventories.

4. What is the significance of establishing maxima, minima, and quantities to order? How are they established?

5. Explain the procedure in getting out a production order. Is there any advantage in studying procedures in view of the fact that procedures differ decidedly from plant to plant?

6. Why is there any need for apportioning manufacturing expense? In what ways may this be done?

7. Explain the general ledger entries made in recording cost transactions.

8. What is the value of cost accounting in business administration?

9. What is the character of the reports used in production? How can the reports be used in administration?

10. How would you prove the desirability of discontinuing the production of a commodity which a concern had produced over a long period of time?

11. Some of the expenses of a plant go on even though the plant may be idle. Does this fact have anything to do with a production program?

12. One company pays its laborers so much per day; another pays on a piece basis; a third on a piece and bonus basis. How would you estimate the labor cost in each case?

13. Indirect costs are those which cannot be charged directly against the product. Name some of these costs. Are "indirect" costs the same as "overhead" costs?

14. A manufacturing company produces 2,000 tons at an average manufacturing expense of \$20 per ton. It plans to double its production during the following year. Will the average manufacturing expense double? If not, why?

PROBLEMS

1. Draw up a detailed organization chart for the production department of a large manufacturing concern.

2. The Dalton Manufacturing Company does not have a personnel department nor does it make use of a labor budget. All of the hiring and discharging of laborers has been done by the foreman of the various departments. This arrangement is very satisfactory to the production manager. He opposes the installation of a personnel department.

Write a report to the president of the company pointing out the advantages in the installation of a personnel department.

3. The Tolles Manufacturing Company purchases steel castings to be used in manufacturing 500 machines. Assume any necessary facts, make and explain the entries which go into the accounts from the time the castings are purchased until the finished machines are sold.

4. The balance on hand of certain castings, on Jan. 1, was 12,500; January 5, 4,000 was applied; Jan. 7, 4,000 was issued; Jan. 15, 2,000 was applied; Jan. 16, 500 was applied; Jan. 22, 2,000 was issued; Jan. 25, 500 was issued; Jan. 29, 5,000 was received.

(1) Draw up a balance of stores similar to the form used at the beginning of this chapter.

(2) Enter the information in the balance of stores record.

REFERENCES FOR FURTHER STUDY

- MACHINE INDUSTRY AND INDIRECT COSTS: Marshall and Lyon, *Our Economic Organization*, pp. 231-246
- THE PRODUCTION DEPARTMENT: White, *Business Management, An Introduction to Business*, pp. 491-507
- COST ACCOUNTING, MANUFACTURING ACCOUNTS: McCarty and Amidon, *Survey Course in Accounting*, pp. 376-389
- THE MANAGER'S ADMINISTRATION OF MANUFACTURING: Marshall and Wiese, *Modern Business*, pp. 93-123
- THE BUSINESS MAN'S TASK OF PRODUCING GOODS: Lyon, *Making a Living*, pp. 178-198

CHAPTER XXVI

THE USE OF INFORMATION IN PURCHASING

PURPOSES OF THIS CHAPTER

1. To show what information is needed in purchasing
 2. To explain how the information is obtained
-

Purchasing, as was stated in earlier chapters, is not always regarded as a separate activity of business. In department stores, as we have seen, purchasing and sales are considered a single activity. In a manufacturing business, it is only when materials are resold after a slight and inexpensive manufacturing process that purchasing and sales are handled by the same department. Much more often purchasing is considered a part of the activity of manufacturing and is placed under the control of the production manager. In our discussion, however, it is considered a separate activity of a separate department.

The purchases department is closely related to the sales and production departments.—Even though the purchases department is organized as a separate department, it must coöperate closely with the other departments of the business. First, the purchasing department makes purchases of materials, supplies, and office and factory equipment, when authorized by properly approved requisition. This requisition, which originates outside the purchasing department, indicates the quantity and specifications of the goods required and the date when wanted. The purchasing depart-

ment should be informed in detail as to the production program if it is to have the materials on hand as needed. Second, the purchasing department must obtain the lowest prices possible, consistent with the quality of goods required. The purchasing department is not guided solely by price considerations, but price is very important. In order that the purchasing department may secure the best prices, terms, and service in connection with the order, it must be informed of the needs of the business far enough in advance to place the order without having to rush the seller for delivery. Third, the purchasing department secures delivery of the goods at the time they are needed. This requires a careful follow-up of orders placed and the close coöperation of the stores and traffic divisions of the business. The stores division is a part of the production department, while the traffic division may be a part of either the purchasing, the sales, or the production department. Finally, the purchasing department must attend to all the details of placing the order, and must keep records of all orders placed. It is obvious that the work of the purchasing department cannot be properly performed without the close coöperation of the other departments of the business. Likewise, the other departments cannot carry on their work effectively without the assistance of the purchasing department. The production department, for example, is dependent upon the purchasing department for a constant supply of materials as needed, and the sales department is dependent upon both. The financial department is expected to pay the bills for materials purchased, and, unless the purchasing department buys in economical quantities, the financial department may be unable to make payment on time. On the other hand, if the financial department has the funds, the purchasing department may be able to take

advantage of a favorable market at certain seasons or months of the year.

Much information is needed in purchasing.—The types of information needed in purchasing are indicated by the accompanying chart.

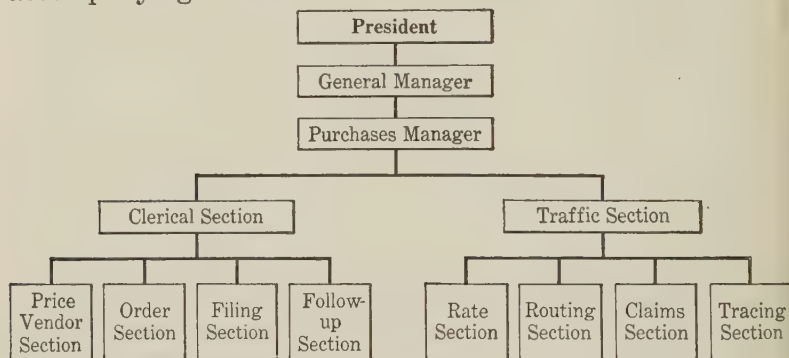


Figure 13.—ORGANIZATION OF PURCHASING DEPARTMENT

The clerical section is in charge of a chief clerk whose duty it is to relieve the purchasing manager of as much as possible of the routine work in connection with obtaining prices, placing the order, and following up for prompt delivery. The price and vendor section keeps an up-to-date file of vendors and prices in the various materials that the business purchases. Catalogues obtained from vendors are filed in alphabetical order according to firm name, and a separate file, which is arranged in alphabetical order by names of materials, shows the names of the companies from whom the material may be purchased. Thus, if the purchasing manager wishes to know from what firms he may obtain a certain material, he refers to the card index for materials. He may then refer to the catalogues of the firm in the alphabetical file of catalogues. The price and vendor section also maintains a file of quotations received from

persons who have bid for orders in the past, quotations received from both successful and unsuccessful bidders being included. This file constitutes a record of all orders which have been placed on the basis of bids received. In case any question arises as to the propriety of any order placed, the file of quotations may be the means whereby the purchase manager may justify his action. Another set of records maintained by the price and vendor section is that of the price of each kind of raw material in past years. This record is of value in showing the degree of fluctuation of prices in times of prosperity and depression. It aids the management in deciding whether to order for long periods in advance or to follow a policy of hand-to-mouth buying.

The order section places the order on requisition from the proper authorities, making the necessary copies and forwarding them to the persons or departments which need to know that the order has been placed. Each order is given a number which is used in all later references to it.

The filing section keeps all records of the purchasing department, filing the information in a manner so that it may be easily found, and making the records of the entire department available to any one who has occasion to use them.

The follow-up section watches deliveries to see that goods are delivered to the business when they are promised. A tickler file is provided, in which copies of all orders are kept according to the dates when the orders will need attention. When the date at which a given order should have been filled arrives, an investigation is made to see whether the order has been received, or if not received, what the progress on the order has been. Unless proper follow-up methods are used, the plans of the production department may be held up for lack of material, and serious loss may result.

The purchasing department places orders for materials or equipment only after requisitions, signed by properly authorized persons, have been received.—Orders for materials used in production may be authorized by the head of the manufacturing department, or, in some businesses, they may be authorized by the keeper of the balance of stores record. In some businesses, the requisition must be signed by both the production manager and the storekeeper. Requisitions for equipment must be approved by the head of the department for which the equipment is to be purchased. The form of the requisition varies to suit the needs of the individual business, but its content is indicated by the requisition which is illustrated.

Purchase Requisition No.		
Date		From
Quantity	Description	Net Price
.....		
.....		
Date required		
Advise Mr. on delivery.		
Required for		
Purchase Order No.		Date
Issued to		
Originated by		Approved by

PURCHASE REQUISITION

After the requisition is received by the purchases department, the price and vendor section obtains quotations from

several vendors. In some cases quotations may not be obtained because of the lack of time, or quotations may already be on file in the department. As quotations are received, they are filed in the purchasing department in order that the purchases manager may show that he has purchased from the vendor who offered the best terms and prices. This file is also of value in the placing of future orders.

The purchase order must be carefully prepared since it becomes the contract for the purchase of goods after it has been accepted by the vendor. Purchase orders are made out on specially prepared forms of which the following is an example:

THE OHIO SUPPLY COMPANY					
Columbus					
Date	19.....	Req. No.	Fur. Order No.		
To		Via			
Address		R. R.			
Ship to					
Shipment to be made				Terms	
Signed					

When the purchase order is made out, several copies are usually prepared. If the requisition originated in the production department, that department should receive a copy. A copy is sent to the accounting department, and one is kept by the purchasing department. The original goes to the firm from which the goods are to be purchased.

In time, the purchaser receives an invoice from the seller similar to that which follows:

THE CENTRAL MANUFACTURING COMPANY						No. _____		
216 Plum Street Cincinnati, Ohio								
Sold to						Date		
Terms.....								
Cases	Dozen	Size	Article	Price		Amount		Total

INVOICE

The purchase invoice is checked in every respect before payment is authorized.—When the purchase invoice is received, it must first be checked with the purchase order to see that the goods billed are the same as those ordered. This is the work of the purchases department. The receiving clerk checks the quantity of goods received. He makes this check from a copy of the purchase invoice, but the quantities are not usually included in the copy sent to him, so that he will actually have to count the goods and not merely check them. If this method is followed, the counting or weighing is likely to be more accurate than it would otherwise be. The materials received must also be inspected and approved for quality. This is the work of the inspection department, or in some cases of the department for which the material or equipment was ordered. If there is a shortage, or if the quality is not the same as was ordered,

the purchases manager notifies the seller and may withhold payment until the matter is satisfactorily adjusted. If the shipment is satisfactory in every respect, the purchases manager approves the invoice and forwards it to the accounting department for payment. The accounting department prepares the check and sends it to the treasurer for his signature.

Purchases may be classified in several ways.—In a retail business, it is customary to classify purchases by departments. This is necessary if the gross profit by departments is to be determined. In a manufacturing business, purchases are usually classified in several ways, but the classification is not entered in the accounting records. The reason for the difference in the method of handling purchases in the two types of business is that the department or other mercantile business sells the same kinds of goods that it buys, whereas the manufacturing business buys raw materials and sells finished goods. It is sufficient for the manufacturing business, therefore, if it debits all materials purchased to a materials account, and then keeps a record of the materials issued in the manufacture of each of the various orders. Materials to be used in manufacture may, however, be recorded in an account separate from that used to record purchases of office supplies or other supplies.

A manufacturing concern may classify its purchases in three ways as follows:

1. By commodities
2. By terms of credit
3. By vendors

An analysis of purchases by commodities is desirable in order that the purchasing department may determine the correct amounts to order. The information may also be

used in securing favorable terms or service from vendors if it can be shown that the business regularly purchases large amounts of some particular commodity. The analysis by terms of credit is useful to the treasurer in planning the finances of the company, since he can determine more accurately what funds will be needed at the various times of the year, as invoices come due. The analysis by vendors, or persons from whom merchandise is purchased, is desirable in showing the sources from which materials are most frequently purchased, and the information may be used in securing better service, or terms of payment, or price, from businesses receiving the larger amounts of orders.

Traffic management is usually considered a part of the purchasing activity.—Traffic, in our present industrial organization, has assumed a great importance because the cost of transportation is an important factor in the cost of the product, and because business activities depend in a large measure, upon the facility with which commodities are carried to and from the establishment. A traffic department can serve in several capacities. It can keep the purchases and sales departments informed as to rates and their changes. It can attempt to secure the best possible rates. It can help the purchase and sales departments in obtaining cars to meet their needs. It can trace shipments, and handle claims against the carriers of goods. The traffic department can scarcely perform all these activities unless it keeps in close coöperation with the departments named.

A variety of arrangements may be made in locating the traffic division in the organization. It may be placed under the supervision of the sales manager. This is the logical place for it if the goods sold are shipped over a wide area. If the materials purchased for manufacture are bought over a wide area and the market for goods sold is limited to

the territory near the plant, the traffic department should be more closely related to purchases. The traffic department may be placed under the supervision of the production manager; but if there is a separate purchases department, the traffic division is logically a part of this department. In a department store, sales, purchasing, and traffic together constitute a single activity which is commonly spoken of as merchandising.

The work of the traffic section is indicated in the diagram on page 452. There are four divisions of the traffic section, namely, the rate section, the routing section, the claims section, and the tracing section. In addition, the traffic manager may have charge of loading and unloading operations and packing. The reason for giving the traffic manager control over packing is that the rates charged on shipments of merchandise vary greatly according to the method of packing the goods, and the traffic manager knows how to crate and pack goods in order to get the best transportation rates.

The rate section audits the freight bills, checking the rates charged and weighing the shipments as they are received to see that the weights charged are correct. Large shippers find that it is to their interest to verify all transportation charges, since carriers may make mistakes just as industrial concerns do.

The routing section determines the route which is to be used in shipping freight, and selects the railway company which is to carry the freight. Rates between the same points may vary according to the route. Frequently goods can be shipped by a combination water and rail route at a saving in freight rates. In some cases, the routing section may distribute the shipments of the company among a number of carriers. The routing section also keeps a check

on railroad cars placed on the siding of the company, sees that cars are loaded or unloaded promptly in order to avoid demurrage charges of the railway company, and requisitions cars when needed. The demurrage charge, it may be said, is in the nature of a fine levied by the railway company against the shipper for keeping the cars on the siding beyond a certain length of time. To keep these charges at a minimum and to make sure that no demurrage charges are incorrectly levied, the routing section keeps a record of the railway cars requisitioned and placed on the siding of the company, the date the car is placed on the siding, the date of loading or unloading, and the date on which the railway company is notified that the car is ready to be moved.

The claims section files claims with the railway company because of the loss of or damage to goods in transit, and because of overcharge on freight due to overweight charges, improper classification of the shipment, or incorrect computation of the charge. With regard to classification, it may be pointed out that the railway classifies all merchandise shipped, the basis of classification being such factors as value of the goods, bulk, weight, size of shipment, method of crating or packing, perishability of such merchandise as fruits and vegetables, and various other factors. The claims section keeps a claims register in which all claims are entered by number. The register also indicates the final disposition of the claim, that is, whether it has been paid or dropped.

The tracing section traces shipments delayed in transit, finds out the causes for delay, and attempts to speed up delivery. When the railways are able to handle promptly all freight shipped, the tracing section does not have heavy duties, but when the railways do not have facilities for handling the large volume of goods which must be moved, the tracing section is very busy. It must always see that the ship-

ments of the company are handled as promptly as possible. When goods are delayed in transit, the tracing section notifies the railway and asks that the shipment be traced. This means that the shipment is followed through the various transfer points from place of shipment to destination.

In addition to the sections of the traffic division indicated, a large company maintains a tariff section. This section handles all data respecting railway charges, maintaining an up-to-date tariff file. The railway companies are constantly changing some rates or transferring commodities from one classification to another, and a company which buys or ships many different kinds of commodities must keep informed regarding all such changes.

The ratio of raw materials inventory to raw materials consumed is an index of the efficiency of the purchasing department.—This ratio is an indication of the success of the purchases manager in keeping down the investment in inventory of raw materials. It is computed by dividing the value of the material consumed for one year by the average inventory.

Another index of the efficiency of the purchasing department is the ratio of the expenses of the department to net sales, the expenses being stated as a percentage of the sales. The percentage usually decreases as sales increase.

QUESTIONS FOR DISCUSSION

1. Describe three different ways in which purchasing may be placed in the organization of the business.
2. What are the important types of information needed by a purchasing agent?
3. Show the advantages of each method of classifying purchases.
4. Show the relation of the purchasing department to the stores clerk, the receiving clerk; the accounting department; the finance department; the sales department; the production department.

5. It has been stated that the purchasing department is not interested in market trends because its function is to buy the goods called for by the sales program at the time when they are needed. What do you think?

6. Coöperation and coördination between sales, production, and purchases is highly desirable. Explain why.

7. Some department stores make use of a purchase budget. Others leave the buying to the judgment of individual buyers. What do you think of the merits of the two methods?

8. In many commercial and municipal undertakings there is a marked tendency toward centralized purchasing. What advantages or disadvantages do you see in centralized purchasing?

9. Sometimes the purchasing agent is placed under the jurisdiction of the production manager. What do you think of this arrangement?

10. Do you believe that a purchasing manager depends upon reports to guide him to the same extent as do other managers?

11. Is it true that the purchasing operations of a business may differ decidedly from year to year? If so, how can past operations be used as a basis of future planning?

12. What is the work of the traffic section?

13. How does the matter of transportation have anything to do with sales? With production? With finance?

14. Traffic departments in businesses are relatively new. How do you account for this? Who, previously, looked after this activity?

15. What individuals, outside the traffic department, desire information respecting its activities? What is the character of the information desired?

16. What do you think of the suggestion that sales, purchases, and traffic records, should be maintained by the accounting department?

PROBLEMS

1. The United Chair Company has had difficulty in getting its bills paid in time to receive the purchase discounts. Sometimes goods are not checked in promptly, and the receiving clerk gives as the reason for the delay that he does not receive a copy of the invoice until after the goods arrive. Sometimes the inspection division is slow in its inspection, but the inspection division says that it inspects promptly upon receipt of notice of the arrival of the goods. Other causes at times delay

the procedure of preparing the invoice for payment. Write a report to the manager outlining a procedure for preparing the invoice for payment which will insure that the treasurer gets the approved invoice in time to make payment.

2. The Davis Plumbing Supply Company has been carrying a larger inventory than the general manager thinks is necessary. The purchasing manager explains that vendors frequently fail to deliver goods when they promise them and that a reserve supply is necessary to insure that production is not delayed for lack of raw material. Write a report explaining a system of checking up on purchase orders to get deliveries more promptly.

3. The Wire Bound Box Company has its central offices in Detroit. It has one factory in Cincinnati and one in Chicago. Its business amounts to about two million dollars annually. It uses about 100 cars monthly for the shipment of raw materials, and slightly less than that number for the shipment of finished goods. It is believed that the company is in need of a traffic manager.

Write a report to the president, stating:

- (1) The advantage of a traffic department.
- (2) The duties of the members of the department.

REFERENCES FOR FURTHER STUDY

- ADMINISTERING PURCHASES AND TRAFFIC: Marshall and Wiese, *Modern Business*, pp. 293-298
- RECORDS AND REPORTS FOR THE PURCHASING DEPARTMENT, McKinsey, *Bookkeeping and Accounting*, pp. 907-922
- PURCHASING: White, *Business Management, an Introduction to Business*, pp. 419-434
- THE BUSINESS MAN'S TASK OF BUYING AND JOBS IN BUYING: Lyon, *Making a Living*, pp. 153-175

CHAPTER XXVII

THE USE OF INFORMATION IN FINANCE

PURPOSES OF THIS CHAPTER

1. To show how the receipt and the disbursement of cash are safeguarded
 2. To explain how the problems of extending credit and of making collections are handled
 3. To explain the method of accounting for stock and bond investments
 4. To show how the balance sheet and the statement of income and expense aid in managing the finances of business
-

The financial department, though frequently very small in the number of persons employed, is one of the most important departments of a business in so far as its authority in determining the policies of the business is concerned. Its importance arises from the fact that every department of the business must have funds to carry on its activities, since every department must pay salaries, consume supplies, and incur other expenses which require the disbursement of funds, and since the funds must be planned for and provided by the financial department. Thus, the plans of such departments as the purchasing and production departments must conform to the requirements of finance. Even the sales department is dependent upon the financial department, for it would be unwise for the business to make sales if the materials for making the goods or the labor necessary for their production could not be financed.

The financial department is responsible for handling the cash and for credits and collections.—While the work of the financial department varies somewhat with different businesses, one of the more usual duties is the planning of the income and outgo of funds. Another duty is that of receiving the cash and disbursing it by check or otherwise. A third duty is that of extending credit to the customers of the business and collecting accounts. In addition to these duties, accounting is frequently a part of the work of this department. Since the treasurer must render reports to the directors showing how all funds have been disbursed, there must be a very close relationship in every case between the work of the treasurer and that of the accountant, but in some organizations accounting is organized as a separate department. The work of the financial department is indicated by the organization of the department shown in the accompanying diagram.

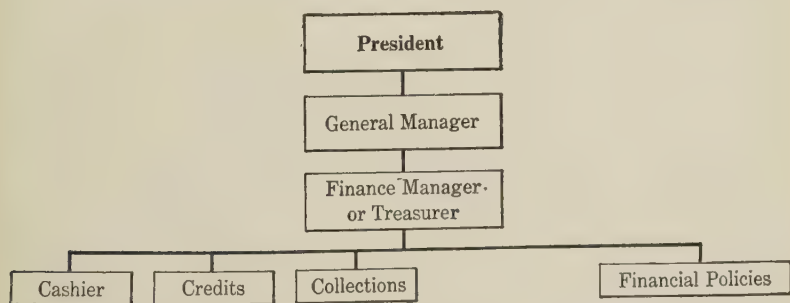


Figure 14.—ORGANIZATION OF FINANCE DEPARTMENT

The diagram represents functions rather than individuals. It does not mean that each of the divisions shown is under a different individual. It was noted in a preceding paragraph that the financial department is frequently very small. Credits and collections are usually under the control of

one person, and the treasurer himself, who is the head of the department, may be responsible for the determination of the financial policies.

Accurate records must be kept of all cash received.—Most businesses receive large amounts of cash through the mails. In a manufacturing business, and in many other businesses as well, practically all of the sales are made on account and remittances from customers are by mail. It is necessary that a system of handling such remittances be devised which will prevent any loose handling of the money and, at the same time, keep all interested persons in the business informed as to the amount of cash received and the sources from which it is received. One satisfactory method of handling cash receipts is to have some employee in the office open the mail and make a list of the cash, this list showing the name and address of each remitting customer, the amount of cash remitted, the discount taken, if any, and the total amount for which the customer is to be credited. The cash, together with one copy of this list, then goes to the cashier who is responsible for the handling of the cash. Another copy of the list goes to the accounting division for their information in making the entry in the general ledger accounts and in crediting the customers for their remittances. Since the cashier must account for all cash received, an effective check upon cash receipts is established by this method.

An additional check upon cash receipts is provided by the requirement that all cash received each day must be deposited on that day. The deposit slip, received from the bank, shows the amount of cash deposited which must agree with the record of cash received. The bank deposit slips may be compared with the cash record at regular intervals by an auditor, or better still, they may be com-

pared each day by the treasurer. If the business is not large enough to have both a cashier and a treasurer, the records may be compared by an independent auditor employed for the purpose.

One reason why the cash received each day must be deposited on that day is that the cashier is thus given a record which will protect him from any charge of having misused the funds of the company.

In a retail concern, the method of handling the cash is more complicated. Some sales are made on account and some for cash. The remittances on account are handled in a manner similar to that just explained. The cash sales may be handled by the tube system, cash received from customers being sent to the cashier through a pneumatic tube, or by the cash register system, cash being handed to a cashier on the selling floor who makes change and records the amount of the sale in the cash register. In either case, the sales person makes a record of the sale, and the total sales as determined from the records of the sales persons must agree with the record of the cashier and with the cash on hand.

All invoices must be carefully checked before being paid.
—Most businesses of any size require that all disbursements of large amounts be made by check. A definite limit is established, and any payment for more than that amount, say \$5.00, must be made by check. Payments for smaller sums may be made in cash from the petty cash fund. The checks are signed by the treasurer, who must be assured that the payment is proper in every way. This requires a careful system of verifying invoices and preparing vouchers for payment. The procedure for invoices for materials and supplies purchased is as follows: When the invoice is received from the vendor, it is compared with the purchase

order to determine whether the goods shipped are exactly as ordered and whether the terms of payment are those which the vendor has offered. When the goods arrive, they are counted by the receiving clerk and inspected for quality by the purchasing department or the inspection department. If the shipment is satisfactory, the invoice is sent to the accounts payable section where it is filed under the date of payment. The accounts payable section prepares the check for the signature of the treasurer, this being done either at the time the invoice is filed or the date the check is to be sent to the treasurer for his signature. When the payment is due, the check together with the invoice is sent to the treasurer. The invoice shows that it has been checked in every respect, and the treasurer is, therefore, safe in making payment.

In the case of payments of expenses, a voucher is prepared and signed by the proper officials, and a voucher must accompany each check which is presented to the treasurer for his signature.

The record of the balance on deposit in the bank is kept on the check stub.—When the treasurer makes a deposit in the bank, he records the amount of the deposit on a check stub which also shows the previous bank balance. The balance after the deposit is made is determined by adding the deposit to the amount of the previous balance and entering the total in the appropriate space on the stub. When a check is drawn, the entry is made in the cash book, and the check stub is filled out to show the date, the person in whose favor the check is drawn, the number of the voucher authorizing the payment, the previous bank balance, the amount of the check, and the new balance. If a number of checks are drawn during the day, however, it is not necessary to compute the bank balance after each check, but the

balance at the close of the day may be computed by taking an adding machine list of the checks for the day and subtracting the total from the bank balance at the beginning of the day and adding any deposits made during the day. The form of the check stub is as follows:

Date	No.
Payee	
Voucher No.	
Account Charged	
Brought Fwd.	
Deposit	
Total	
This check	
Carried Fwd.	

CHECK STUB

There may be ledger accounts with the bank which would also show the amount of the bank balance. The entries to this account are made from the cash receipts book and from the cash payments book. If all cash is deposited on the day it is received, the cash book should contain a column headed, First National Bank, Dr., in which the cash deposited in this bank is entered. This column replaces the column headed Cash, Dr. which is not needed if all cash is deposited on the day of its receipt. In the cash payments book, a column is provided for First National Bank, Cr., in which the amounts of all checks drawn on this bank are entered. When these columns are posted, the account with the bank shows the same balance that the check stub shows. Instead of this ledger account, however, there may be merely an account with Cash which would show the total

Name SPRING MANUFACTURING COMPANY Address 645 Market Street		In Account With FIRST NATIONAL BANK Statement of your account to close of business, March 31, 1930		Your present balance is the last item in the New Balance column	
Date	Checks in Detail	Date	Deposits	Date	New Balance
	Balance Brought Forward				
Mar. 1	10.00 35.50 18.05	Mar. 1	250.00	Mar. 1	595.00
Mar. 2	38.90 27.00 80.00	Mar. 2	130.75	Mar. 1	531.45
Mar. 3	120.89			Mar. 2	662.20
				Mar. 2	516.30
				Mar. 3	395.41
Please examine this statement upon receipt and report at once if you find any difference, so that we may know definitely whether our books agree with your own. If no error is reported in ten days the account will be considered correct. All items are credited subject to final payment.					

cash balance whether in the bank or on hand. If this method is used, the only record of the balance on deposit is the check stub.

The balance on deposit must be verified each month by a comparison with the bank statement.—The bank keeps a record for each depositor showing the balance on deposit with it, and each month prepares a statement for the information of the depositor, showing the balance at the beginning of the month, the deposits made during the month, the checks cashed, and the balance at the end of the month. This information may be recorded in the pass book. The depositor brings this book with him each time he makes a deposit and the amount of the deposit is entered as a credit. At the end of the month, he leaves this book at the bank, and the total amount of the checks drawn during the month is entered as a debit, the balance on deposit being brought down to the next month. Many banks have found this an unsatisfactory method, however, as depositors do not always remember to turn in their pass books at the end of the month, and most banks now follow the plan of mailing a statement to each depositor, the pass book serving merely as the depositor's record of his deposits. The form of the statement prepared by the bank is shown on page 470. Whatever method is used, the depositor receives his canceled checks from the bank along with the statement of the balance on deposit.

There are several reasons why the balance on deposit as shown by the check stubs must be compared with the statement received from the bank. Either the check stub or the bank statement may be incorrect. The amount of the check as recorded on the check stub may not always agree with the amount of the check. For example, a check might be drawn for \$84.00 and entered on the check stub and in the

cash book as \$48.00. An error of this sort may not be detected unless the statement received from the bank is examined. Other errors may be made by the bookkeeper, and errors may be made by the bank though this is not often the case. Any errors that are made, however, must be found within a short time if satisfactory adjustment is to be made. Another reason why the bank statement must be carefully examined is that checks may be altered after they are sent out but before they reach the bank. Occasionally, signatures are forged to checks. A forged or altered check is void, but it may be paid by the bank if the alteration or forgery has been skillfully done. It is not likely to be detected by the depositor unless he compares the checks received from the bank with his own records.

The balance shown by the bank statement will usually not agree with the balance shown by the check stub on the last day of the month. There are several types of transactions which will cause the two to differ. When the business draws a check in favor of a creditor, the bookkeeper makes an entry immediately, subtracting the amount of the check from the bank balance. The bank cannot charge the depositor until the check has been presented to it for payment. Thus the checks which have been drawn by the treasurer but not yet received by the bank have been deducted from the bank balance on the books of the business but not on the books of the bank. Another type of transaction which will cause a difference, arises from the sending of notes for collection. The treasurer turns over to the bank for collection a note receivable, signed by a business concern in some other city. When the bank receives the proceeds of the note, it credits the deposit account with this amount, but the depositor cannot make a similar entry until he has been notified that the proceeds have been received. Such a transaction

at the end of the month will cause the bank statement to show a balance which differs from that shown by the check stub. If the bank has made a service charge against the account of the business or has credited interest on the deposit without notifying the treasurer, these transactions will also cause differences between the two records. The statement which is prepared showing the reasons for the differences in the two records is called a *bank reconciliation statement*.

To illustrate the process of reconciling the bank balance, let us assume that the bookkeeper has received the bank statement showing that on November 30 the business had a bank balance of \$785.44. The balance as shown by the check stub on the same date was \$813.94. The first thing for the bookkeeper to do is to compare the checks returned by the bank with the check stubs, in order, first, to see whether the checks were entered on the stubs correctly, and, second, to learn what checks have been issued but have not yet been presented to the bank for payment. He finds that the checks were entered correctly but that three checks are still outstanding. These checks are listed and totaled.

GREENVILLE MERCANTILE COMPANY

BANK RECONCILIATION STATEMENT, NOVEMBER 30, 1929

Balance on deposit according to bank statement	\$785.44
Deduct Outstanding Checks:	
No. 481, dated November 22	\$15.00
No. 493, dated November 29	70.15
No. 494, dated November 30	10.50
	95.65
	689.79
Add deposit in Transit November 30	125.00
	814.79
Deduct Exchange charges made by bank but not yet entered on our books	.85
Balance as shown by check stub	<u>\$813.94</u>

The bookkeeper finds also that a deposit of \$125 was entered on November 30, but that the bank has not yet credited the business with this amount. During the month, the bank made exchange charges on checks and drafts to the amount of \$.85, for which no entry has been made in the books. With these facts, the bookkeeper prepares a bank reconciliation statement similar to that on page 473.

The true balance on deposit in the bank on November 30 was not \$813.94, however, since the exchange charges must be deducted from the amount to determine the true balance. To adjust the accounts properly an entry must be made in the cash book debiting Exchange and Collection charges and crediting the bank. Should there be differences due to errors in entering checks or to notes collected by the bank, additional entries would have to be made to adjust the books in accordance with the facts.

The credit division compiles information to determine credit standing of customers, and passes upon applications for credit.—Whether the business makes profits or suffers losses frequently depends upon the care which is exercised in extending credit. Extreme caution will cause the business to refuse credit to customers who could pay and would pay if credit were granted. The business thus loses sales which it should make and which would increase profits. On the other hand, a policy which is too liberal will cause unduly large bad debt losses which will decrease profits and may turn an otherwise good showing into a loss. It is a common saying that any one can give goods away, but the successful business man is one who can demand and receive payment. A sound credit policy is very important, and a separate section of the treasury department is usually organized to handle credits.

If a request for credit is made by a prospective customer

who has not done business with the company before, there is usually no information in the files relative to the financial standing of the applicant. It is the work of the credit section to compile, interpret, and file, the necessary information. In the future, additional facts learned about the customer or his business will be added to the file so that the rating of the customer may be changed as conditions require, and requests for increased amounts of credit may be intelligently passed upon.

The most important single source of information is the report of the financial condition of the business which is received from the customer himself. This report includes a balance sheet and a statement of income and expense. The applicant is asked to give any other information which has a bearing upon the condition of his business, such as the amount and kinds of insurance carried, the nature of the accounting records which are kept, law suits pending against the business, if any, and any assets pledged with other creditors. The applicant is supplied with a form to be filled out, in which the desired information is entered.

The report made by the customer is supplemented as far as possible by information obtained from other sources. One very important source of information is the "credit association" or similar organization made up of a group of business men who, through a central office, give one another credit information. Reports of financial standing may be obtained from mercantile agencies, such as R. G. Dun and Company, and Bradstreets. Banks also sometimes render reports when requested to do so, and, although banks are usually reluctant to furnish any information, their reports are reliable. Of very great importance in passing upon credit applications are the reports of salesmen. A salesman who visits the place of business of the customer once a

month has a splendid opportunity to observe the amount of business which the customer is doing, the condition of his stock of merchandise, the appearance of his show windows, the favorableness of the location, the nature of the competition, and other important facts.

On the basis of the information relative to the financial condition of the applicant, the credit department decides whether or not to extend credit. It also establishes a credit limit, which means that the customer is to be allowed credit up to a fixed amount, the credit manager being called upon to pass upon future orders received in case the customer has exceeded his limit. The amount of the credit limit is recorded in the heading of the account of the customer where it is referred to each time an entry is made in the account. It is necessary also for each order to be passed upon before the goods are shipped, and this should be done by some one in the credit department though not necessarily by the credit manager himself.

The accounting department must notify the credit department of any important developments affecting the credit standing of the customer.—The accounting department is constantly recording charges to the account of the customer for sales made, and is entering credits for remittances received or for allowances granted. Occasionally circumstances will arise which indicate that the customer is not in as good a financial condition as he formerly was or that he is not playing entirely fair with the company. Any such facts should be brought to the attention of the credit department. Some of the things which the accounting department may observe which the credit department should know are the following:

1. The customer may fail to pay an account at the maturity date.

2. An account which is overdue is subject to a charge for interest. The customer may fail to pay the charge.
3. The customer may refuse to honor a draft drawn upon him in accordance with the agreement of sale.
4. The account of the customer may reach the limit fixed by the credit department.
5. The customer may greatly increase the number of his orders. Of course there may be a legitimate reason for this, but it is a development which will bear careful watching.
6. The customer may take a cash discount to which he is not entitled. This may be an attempt to take advantage of the company, or it may be due to a misunderstanding on the part of the customer.
7. Claims for shortage or damage may be made under circumstances which indicate that the claim is not justified. If a number of such claims are presented in succession, the claims have much significance.

Overdue accounts are placed in the hands of the collection department.—The collection department works with the credit department, and, in fact, the two usually constitute a single department. An account which is overdue requires special attention if the business is to receive the payment due it and yet retain the good will of the customer. The collection department first makes a courteous but firm demand upon the customer for payment. If the customer refuses to pay or to make satisfactory arrangement, a draft may be drawn upon him and presented for payment through his local bank. Failure to honor the draft might mean that the customer would lose standing with his bank and under these circumstances he is not likely to refuse payment. If payment of the draft is refused, as a last resort the account may be turned over to a collection agency or an attorney.

Despite all attempts at collection, however, some accounts must be charged off as uncollectible.

The treasurer must be informed as to the value of the investments of the company and the income received from different types of investments.—Many corporations have funds which they temporarily do not need, and if the board of directors so directs, the treasurer may invest these funds in bonds or stocks of other corporations. In many cases, corporations plan to keep some of their assets permanently invested in the bonds and stocks of other corporations. In other cases, it is expected that the securities will be sold as soon as the business needs additional funds. The value of the stocks and bonds owned by the company as well as the income from them is shown in the accounts. The entries made to record the purchase of stocks and bonds, the receipt of dividends and interest, and the sale of each class of security will next be considered.

Special problems arising in accounting for bonds purchased.—Bonds should be recorded at cost.

Bonds, Jones Co., 10-yr. 5%	\$5,000	
Cash		\$5,000

The bonds should appear in the balance sheet under Investments. When they are sold, the reverse entry is made, but, of course, if the selling price be greater, the difference would indicate that which has been gained and would be shown by a credit to Profit on sale of Investments.

When bonds are purchased as a long time investment, it is intended that they be retained until they become due. At that time a fixed amount of money, which is the par value of the bonds, is to be received; and, therefore, it is essential that the par value of the bonds be the balance of the bond account when the bond matures. Bonds may be pur-

chased above par or at a premium, at par, below par or at a discount. Consequently, in order to have the par value of the bonds appear in the account at maturity, some disposition must be made of any premium or discount in the interim.

Suppose twenty, 10-year 5% bonds, with a total par value of \$20,000, are purchased from the Jones Company, and that the market price is \$900 for each \$1000 bond. That is, the bonds are purchased at a discount. The transaction should be recorded in this way:

Bonds, Jones Co., 10-yr. 5%	\$20,000.00	
Cash		\$18,000.00
Discount on Bonds Purchased		2,000.00

At the rate of 5% (which is figured on the par value of the bonds and not on the cost), the interest each year would be \$1,000. When the interest is received, the entry is as follows:

Cash	\$1,000.00	
Discount on Bonds Purchased	200.00	
Bond Interest Earned		\$1,200.00

In the first entry, the Discount on Bonds is in the nature of an income account. It would be improper to place that full amount in the Expense and Income account as an earning for the period when the bonds are purchased. On the contrary, it should be spread over the life of the bonds. If, then, every year when the interest is paid, the Discount on Bonds account is debited by one-tenth of the total, each period will receive credit for \$200, because \$200 is included in the \$1,200 of the income account shown in the second entry. When the bonds mature at the end of 10 years, the Discount on Bonds account will have been written off. The bonds should be shown on the balance sheet each year at the par value less the discount, in a manner similar to

the method of showing fixed assets at cost less the reserve for depreciation.

If the interest on the bonds is received semiannually, as is usually the case, the discount on bonds would have to be written off over twenty periods of six months each instead of ten periods of twelve months each. The entry to be made at each interest date would be:

Cash	\$500.00	
Discount on Bonds	100.00	
Bond Interest Earned		\$600.00

The principles involved when bonds are purchased at a premium are similar to those followed in handling bonds purchased at a discount. If the bonds of the Jones Company were purchased at 105, or \$1,050 for each \$1,000 bond, the entry which is to be made at the date of purchase would be:

Bonds, Jones Company — 10-yr. 5%	\$20,000.00	
Premium on Bonds	1,000.00	
Cash		\$21,000.00

When the interest for the year is received, the entry would be:

Cash	\$1,000.00	
Premium on Bonds		\$100.00
Bond Interest Earned		900.00

If the interest is received semiannually, the entry would be:

Cash	\$500.00	
Premium on Bonds		\$50.00
Bond Interest Earned		450.00

Whether the interest is received annually or semiannually, \$100 of the premium on the bonds is written off each year, so that the total amount has been written off at the time of the maturity of the bonds. The credit to bond interest

earned is much less than in the preceding illustration because in the second case it was assumed that the company paid a premium when it purchased the bonds. On the balance sheet, the premium on bonds is added to the par value, and the total is carried over into the money column as the value of the bonds.

Special problems arise in accounting for stocks purchased.

—Corporations sometimes purchase the stocks of other companies. There are two reasons for this. They may wish to find employment for funds which would otherwise be idle for relatively short periods of time. In this case the investment is likely to be temporary, the stock being sold as soon as the corporation has need for the money invested. The more usual reason for the purchase of the stock of other companies is that the directors wish to have a voice in the management of the company whose stock they are buying. In this case, the investment is meant to be permanent. In either case, the account with the stock purchased is debited with the cost of the stock. If the investment is permanent, any fluctuations in the market price of the stock may be disregarded, and the stock may continue to be shown in the accounts and on the balance sheet at cost price. If the investment is temporary, however, a decline in the price of the security is significant because it indicates that the company may not be able to sell the stock for as much as it paid for it. Increases in price are disregarded even for temporary investments, because the stock may not be sold at the increased price but may be held until the price has declined. As in the case of inventory valuations, losses should be anticipated but profits should not be. In other words, temporary investments should be valued at cost or market, whichever is lower.

The entries to be made in recording the facts for temporary

investments may best be illustrated by an example. It is assumed that an investing corporation, X, has purchased 100 shares of stock of the Y corporation at \$150 per share. The stock account is debited for the cost price.

Stock of Y corporation	\$15,000.00	
Cash		\$15,000.00

If, at the balance sheet date, the stock is selling in the market at \$140 per share, the stock account should be written down by a debit to Loss on Stock of Y Corporation and a credit to Stock of Y Corporation. The credit may be made in a reserve account which would have some such title as Allowance for Anticipated Loss on investment in Y Corporation, thus:

Loss on Stock of Y Corporation	\$1,000.00	
Allowance for Anticipated Loss on Investment in Y Corporation		\$1,000.00

The balance of the Loss on Stock of Y Corporation should be carried directly to the Surplus account, or shown on the last section of the statement of Income and Expense. The Allowance account should be shown on the balance sheet as a deduction from the value of the stock, or the stock may be shown at market value without showing the amount of the allowance for loss.

Dividends declared on stock are income to the investing corporation as soon as they are declared even though they are not immediately paid in cash. The entries to be made by the X Corporation in connection with the declaration and payment of a dividend of 6% on the stock of the Y Corporation are as follows:

Dividends Receivable	\$600.00	
Income from Dividends		\$600.00
Cash	600.00	
Dividends Receivable		600.00

The Dividends Receivable account is an asset account, and, if the account should be open on the books at the date of the balance sheet, it would be shown on the balance sheet as a current asset. The Income from Dividends is closed into Expense and Income at the end of the period. On the statement of income and expense, the amount of such income should be shown under the heading of Other Income. The entry to record the receipt of dividends on stock is the same regardless of whether the stock is held as a temporary or permanent investment.

The financial reports contain much information of value in the formulation of financial policies.—One of the primary aims of financial management is to maintain the solvency of the business, that is, to enable the business to meet its liabilities as they mature. The information contained in the balance sheet assists the manager in judging how well he is succeeding in this respect. First, it enables him to compare the current assets with the current liabilities. The significance of this comparison lies in the fact that the current liabilities presumably will be paid from the proceeds of the current assets. It is usually held that the current assets should be at least twice as large as the current liabilities in order to allow for a possible shrinkage of the assets. However, if the inventory moves slowly and if long terms of payment are allowed on the accounts receivable, the current ratio should be correspondingly higher. The ratio, in fact, varies according to the particular business and the industry at large, the season of the year, and the phase of the business cycle. Most businesses attempt to maintain a much higher ratio than two to one. The comparison of cash plus accounts receivable with current liabilities is also significant. This comparison is sometimes spoken of as the ratio of quick assets to current liabilities.

Another important guide to financial management is the ratio of current liabilities to total debit. If a large percentage of the debt is constantly maturing and must be either paid off or renewed, the position of the company is less secure than it would be if the maturity of the greater part of the debt were placed far in the future. Of course, if the total debt is relatively small, a large part of it or even the entire amount may be current. The relative size of the debts of the business is measured by finding the ratio of net worth to total liabilities.

The number of days' purchases remaining unpaid at the date of the balance sheet is another indication of the success or failure of the financial manager. This ratio, which is sometimes called the turnover of accounts payable, is computed by first dividing the annual purchases by the number of days in the year to find the average purchases for one day, and, second, by dividing the accounts payable by one day's purchases. If the amount of purchases remaining unpaid shows a tendency to increase, the financial position of the company may be becoming unsound. A better guide, however, is the ratio of purchases discounts taken during the year to the total possible discounts. It is not easy to determine the total possible discounts unless the terms are the same on all purchases made. If the terms are the same on all purchases, the possible discounts may be approximated by multiplying the purchases for the period by the rate of discount allowed.

Other significant financial comparisons are the ratio of accounts receivable to sales and of bad debt losses to sales. The first is a gauge of the average age of the accounts. Most businesses do not rely upon this ratio, however, but compute the average age from the accounts receivable ledger. Aging the accounts, as it is called, is done by listing

the accounts outstanding according to the period of time which has elapsed since the date of the sale and by computing the average. The accounts are usually grouped according to classes,—less than thirty days, 31 to 60 days, 61 to 90 days, 91 days to six months, and over six months. The ratio of bad debts to sales is an index of the efficiency of the credits and collections department. This ratio is computed by classifying the bad debts actually charged off according to the year in which the sale was made and computing the percentage of bad debts to net sales of that year.

The efficiency of the management of the business as a whole is measured by the percentage of net profit to net sales and the percentage of net income to proprietorship. A figure in which the prospective investor is interested is the number of dollars earned for each share of stock outstanding, but this is not significant as a guide to management.

Conditions vary so much from business to business that it is impossible to set up absolute standards of good financial management. Each company must compare its condition during the current year with its condition in preceding years; and if it finds that its condition is becoming less sound, measures must be taken to correct the unfavorable tendency.

QUESTIONS FOR DISCUSSION

1. What is the procedure in making a deposit at a bank? What records of the deposit are kept.
2. What do you think of the policy of keeping all cash in the bank and making payments entirely by check? How would one determine the amount of cash to keep in the bank?
3. Explain and illustrate the various records kept in extending credit.
4. What do you think of the advisability of establishing a credit department? What are the duties of such a department?

5. Explain the procedure in the handling of cash. Show how a careful check may be kept of the cash received and the cash disbursed.

6. Many businesses invest in the stock of other concerns. How should investments be valued for balance sheet purposes? What provision should be made on the books for an anticipated loss on investment? What entry is made where a loss occurs? Where should investments be placed in the reports?

7. How is discount on bonds or premium on bonds recorded in the case of bonds purchased? Where do bonds purchased appear in the reports?

8. If there is a discount on bonds or a premium on bonds in the case of bonds issued, how is this information recorded? Where do bonds issued appear in the reports?

9. You purchase bonds upon which interest has accrued. What entry should you make at the time the bonds are purchased? At the time the interest is received?

10. What reports does a manager depend upon to show him the financial standing of the business? How do they differ from the reports of a bank?

11. The credit manager of the Y company makes extensive use of Bradstreet's and Dun's when he is considering the extension of credit to customers. Is this a good practice? Should he depend upon other sources of information? If so, what?

12. The X Company has a surplus of \$100,000. The directors are undecided whether to pay this amount in dividends or retain it in the business. What factors would they need to take into consideration in making their decision?

13. The B company purchases capital stock of \$40,000 of the A company at \$45,000. There is a brokerage fee of \$50. How should this be recorded?

14. On June 15, the M company declares a dividend which is payable on July 1. Assume the necessary facts and make the entries.

PROBLEMS

1. Construct an organization chart for a credit department in a large manufacturing concern, setting forth its various activities in detail and showing its relationship with other departments.

2. Silas A. Smith, a rancher in eastern Montana, goes to the State Bank of Billings, Montana, and asks for a loan of \$20,000 to enable him to purchase harvester machinery.

Assume the necessary accounts and amounts and prepare for Silas A. Smith:

- (1) A balance sheet.
- (2) A statement of income and expense.
- (3) A report upon his character.

3. The Lowell Manufacturing Company has a gradual yearly increase in loss from bad debts. Upon investigation you find its credit and collection procedure is decidedly unsatisfactory. What credit supervision there is, is done by an assistant to the treasurer who is rather incompetent. Monthly statements are sent to customers on the first of the month. Payments are supposed to be made by the middle of the month.

Write a report setting forth:

- (1) The necessity for a credit department.
- (2) The functions of such a department.
- (3) The procedure that should be followed in the granting of credit and the making of collections.

4. The following balance sheet is submitted by a manufacturing company as the basis of extension of credit:

SIMS AND SIMPSON
BALANCE SHEET, DECEMBER 31, 1929

<i>Assets</i>		
Cash		\$5,000
Factory		15,000
Machinery and Tools		7,000
Accounts Receivable		80,000
Goodwill		5,000
Raw Materials		9,000
		\$121,000
<i>Liabilities</i>		
Bills Payable		\$70,000
Accounts Payable		27,000
A. B. Sims		18,000
R. E. Simpson		6,000
		\$121,000

As a credit manager of the X Company, write a letter to Sims & Simpson, containing:

- (1) Recommendations for a different arrangement of the information.
- (2) What further information you desire?

5. What kind of entries should be made to correct the following errors?

- (1) Goods returned amounting to \$4,000 have been entered as purchases.

- (2) Cash sales of \$2,000 have been twice credited and the debit has been omitted.
 - (3) \$10,000 of a cash balance from the preceding month has been posted during the present month to the debit of the cash account.
 - (4) A check for \$400 in payment to customers, was entered as a debit to cash and a credit to accounts receivable.
 - (5) Sales discount of \$2,000 was posted to the credit of the Sales Discount account.
 - (6) Purchase discount of \$2,500 was posted to the debit of the Purchase Discount account.
6. The Sells Holding Company asks you to make the following entries for December, 1929:

Dec. 1 Bonds were issued at a par value of \$100,000 but sold at \$95,000.

Dec. 5 Purchased \$4,000 worth of stock from the A. B. Company for \$3,500. There was a brokerage fee of \$5.

Dec. 10 It is believed that there will be a loss of \$500 on an investment in the Z Company.

Dec. 15 Dividends of \$5,000 have been declared by the Y Company to which the Sells Holding Company is entitled.

Dec. 31 Purchased a 6% debenture bond for \$10,000. Interest for three months has accumulated on this bond.

REFERENCES FOR FURTHER STUDY

THE FINANCIAL DEPARTMENT: White, *Business Management, an Introduction to Business*, pp. 328-332

RECORDS AND REPORTS FOR THE FINANCIAL DEPARTMENT: McKinsey, *Bookkeeping and Accounting*, pp. 960-970

THE MANAGER'S ADMINISTRATION OF FINANCE: Marshall and Wiese, *Modern Business*, pp. 339-374

FINANCIAL INSTITUTIONS AND FINANCIAL ORGANIZATION: Marshall and Lyon, *Our Economic Organization*, pp. 354-369

THE BUSINESS MAN'S TASK OF SECURING MONEY; JOBS IN FINANCE: Lyon, *Making a Living*, pp. 126-137; 140-150

CHAPTER XXVIII

THE BUDGET

PURPOSES OF THIS CHAPTER

1. To show how the various activities of business are planned
 2. To explain the advantages of planning
 3. To show how the budget plans are carried into effect
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Budgeting or financial planning has come to be recognized as necessary to well organized and ordered financing in domestic, governmental, and business affairs. The annual incomes of many households are spent in accordance with budgets which are carefully worked out and written down at the beginning of the year. Expenditures for insurance and savings as well as those for rent, groceries, clothing, and medicine, may be included. If the needs for various desirable things are considered, the income will be spent in the way that is most beneficial to the family. Many city and state governments and our federal government have found the same sort of definite planning of receipts and expenditures to be necessary to well ordered finance.

A business budget may cover finances only, or it may cover all phases of business activity.—A business budget which includes finances only is an estimate of the cash receipts and disbursements of the business. The receipts and disbursements are usually stated as totals for each month, though the period may be the week. The estimate of receipts indicates the total receipts for each month, and

also the sources of the funds such as collections from credit sales, cash sales, sale of fixed assets or securities, proceeds of bond issues, and bank loans. The estimated disbursements for each week or month are classified according to the object of the disbursement. The disbursements will include, for example, payments for purchases made on account, cash purchases, payments of operating expenses, retirement of bonds previously issued, payments of bank loans, and dividend payments.

The complete budget goes much further than the cash budget and includes detailed estimates of the work of each department of the business. For example, the cash budget or financial budget includes an estimate of the income from sales, but the complete budget includes estimates of the sales of each individual item, not only in dollars and cents but also in units of product. For an automobile manufacturer, this would mean an estimate of the sales of each model of car and of each repair part. As part of the complete budget, a production budget is prepared, which would show not merely the expenditures for production, but also the number of units to be manufactured. The purchases budget, which is subsidiary to the production budget, shows the amount and cost of each kind of raw material to be purchased. Separate budgets are also prepared for manufacturing expense, personnel, plant and equipment to be purchased, selling expense, and administrative expense. Thus the complete budget includes estimates not only of the detailed operations of the financial department, but also of all other departments of the business. The complete budget can be prepared and executed only by the cooperation of all the departments of the business in collecting the information upon which the estimates are based, in correlating and revising the plans of the various depart-

ments, and in making the estimates into a workable plan for the business as a whole. While the financial budget may be prepared alone, it is usually prepared in connection with the complete budget. In this chapter, the preparation and use of the complete budget will be described.

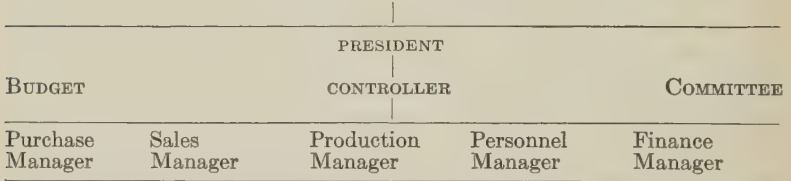
The president is usually the nominal or actual head of the committee responsible for the preparation and enforcement of the budget.—It is necessary to have some definite organization in the business which is responsible for the preparation of the budget and which sees that the provisions of the budget are carried out according to plan, or which approves the departures from the original budget which later developments show to be necessary. The organization which does these things is the budget committee, composed of the heads of the various departments of the business. At the head of this committee is the president. It is necessary to make the president the chairman of this committee because no one department can logically be placed in charge of the budget. A business budget is a plan for the business as a whole, and no one department, such as the treasurer's department or the controller's department, should be placed at the head of it. Such an arrangement would be likely to create friction within the organization.

The president is assisted in the performance of his budgetary duties by an official called the controller.—In a very large business the president usually is too busy with other affairs to concern himself a great deal with the details of preparing the budget. The controller assists the president and, in many cases, actually takes over the work of compiling the budget and preparing the reports showing actual accomplishment. While the president is at the head of the program, the controller has direct supervision of the procedure.

Since the controller is the head of the records and reports

activity, he is, therefore, the logical person to assist the president in the budgetary work. As head of the accounting department, he is in a position to secure all necessary data of past income and expenses of the business which are used as a starting point in estimating income and expenses for future periods. If the treasurer is in charge of the accounting work, he is the logical head of the budgetary procedure. In any case the treasurer is greatly concerned with it, for many of the estimates are in financial terms and the treasurer is responsible for the financial plans of the business. The organization for preparing the estimates and for supervising the execution of the budget during the period is illustrated in the accompanying diagram.

BOARD OF DIRECTORS



The controller's procedure in preparing and enforcing the budget may be summarized as follows:

1. If the budget year is from January 1 to December 31, during September or October he requests estimates of probable expenditures of each department for the ensuing year. These estimates are recorded by the various heads of departments on forms sent out by the controller. The forms are returned to the controller with the information requested, before a specified date.

2. The controller then turns over these various estimates, with his recommendations, to the budget committee. He may go so far as to compile the estimates in budget form before submitting them to the committee. At this time he

submits data of a general nature which will be helpful in making up a work program.

3. After the budget has been approved by the committee (and in some cases by the president and the board of directors), the controller returns the revised estimates to the departments from which they came. These are to serve as guides in the departmental activities.

4. From time to time during the budget year, say once every month, the controller receives reports from the department heads indicating what has been accomplished. These reports serve as a check upon the budget program.

5. The reports are transmitted to the budget committee. In the light of the information received it may be necessary for the budget committee to revise the whole budget. This revision may be necessary because some department, such as the sales or the production department, is unable to do the work which it had planned to do. In some cases the revision is made necessary by changes in the general business situation, such as a change in the phase of the business cycle.

6. If any changes are made, the information is sent to the departments affected as a guide under the revised plan.

The procedure followed in preparing and transmitting the budget estimates is illustrated graphically in this way:

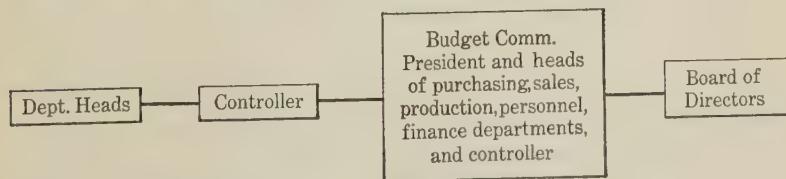


Figure 15.—PROCEDURE FOR PREPARATION OF BUDGET

In a small business, the president may readily perform the functions of the controller. Whether the president acts as

controller or a special officer performs this function, his chief duty is to supervise the sales, selling expense, advertising, production, personnel, purchases, manufacturing expense.

The sales budget is the keystone of the entire budgeting structure.—The sales budget is probably the most important of the various budgets prepared by the wholesale, retail, or manufacturing concerns, because all of the others are based upon it. In a manufacturing business, production plans are based upon it, for goods are produced only that sales orders may be filled; personnel plans are based upon it, because the sales program determines, in a large degree, the number of workers it will be necessary to employ; the financial budget is dependent upon it, because it is from this source that most of the income is received. There is a similar connection between all of the other budgets and sales.

The sales estimate depends upon the general plans and policies of the business. For example, an increase in the sales may be expected because the concern contemplates entering new territories. The sales estimate also depends upon changes in general business conditions and in the market for the goods produced by the company. Such questions as the probable buying power of consumers, should be considered. Finally, the previous records of the business should be used as a basis for the estimate. This involves a study of previous sales from the point of view of both value and terms of sale. For example, data showing the sales price of typewriters sold during a preceding period will be of value in preparing a sales estimate in dollars and cents, but a statement in terms of numbers of typewriters sold is also necessary.

The data for past years, which are used as the starting point in the preparation of the sales budget, should be

arranged in a form in which they can be easily interpreted. One useful device is a chart of sales by months, the sales of a number of years being shown on a single chart as illustrated below.

The sales budget should be prepared either by the sales manager himself or under his supervision. He may obtain

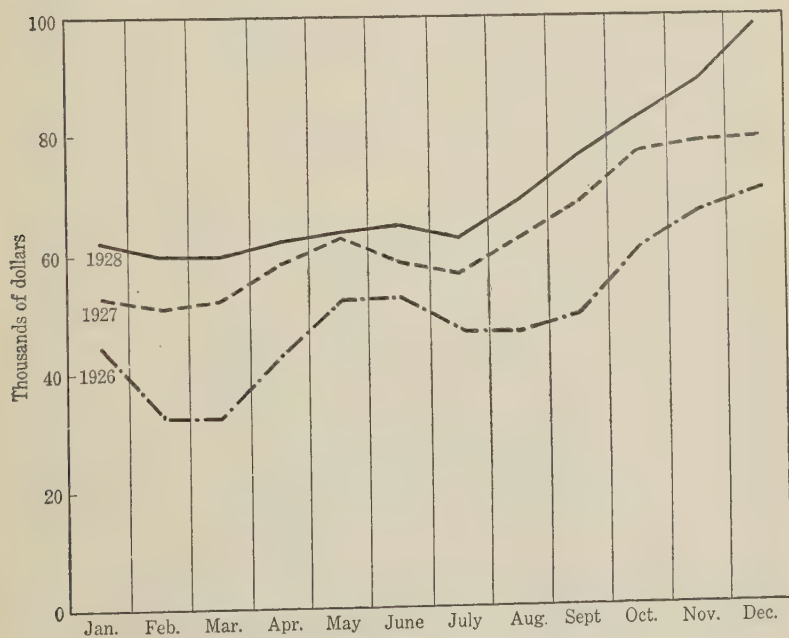


Figure 16.—SALES BY MONTHS

from the various salesmen estimates of the probable sales in their respective territories. Since the salesmen are in constant touch with customers, they may be in a position to estimate very accurately the sales they may be expected to make. These estimates cannot be accepted by the sales manager without careful revision, however, since the sales-

men may be so close to their restricted territories that they fail to observe what is happening to business in general. There is also the possibility that the individual salesmen may be too optimistic. Then, too, the salesmen may not be fully informed with regard to changes in advertising policy or in the design of the product or other changes in the policy of the company. There is also the necessity of correlating the sales budget with the other departmental budgets, such as the production budget or the financial budget, and the individual salesmen are not in a position to do this. Thus, the sales budget must represent primarily the work of the sales manager.

The length of time for which a budget is prepared varies according to the type of business. The usual time is one year, though in many cases it is for a shorter period of time. In some lines which have a decided seasonal fluctuation, such as certain clothing trades, the estimate is made by seasons. Some public utilities plan their expansion of plant and equipment for several years in advance. A budget extending over a period longer than one year, however, is the exception, for business conditions cannot be accurately estimated for more than a year in advance, and even a forecast for that period of time usually must be revised before the year has passed.

Proper control of the sales budget requires that the estimates be compared with actual performance throughout the year and that the estimates for the remaining months of the year be revised promptly as the situation demands. This fact may be illustrated by reference to the budgets of automobile companies of a recent year. The sales and production budgets were planned with the belief that the business was to have a banner year, but in March it was discovered that the demand for cars was not developing as had been

anticipated. The budgets had to be completely revised, for, obviously, it was not good policy to continue to produce automobiles which the market would not absorb at satisfactory prices. A revision of this sort must be made as soon as it becomes evident that the original estimate was in error, and complete reports of sales must be prepared promptly at the end of each week or month.

The sales budget and the selling expense budget are closely interrelated. Selling expenses must be incurred in the execution of the sales program, and the volume of sales to be expected depends in part, at least, upon the amount of advertising and other selling expenses which are planned. On the other hand, the amount of selling expenses which may profitably be incurred depends upon the sales which may be expected to result from the advertising campaign. In other words, in almost any case the incurring of additional selling expenses might be expected to result in some additional sales, but sound business policy requires the fixing of that amount of selling expenses which will result in the greatest net profits to the business over a period of years. Thus, the selling expense budget depends upon the sales budget, and the sales budget, in turn, depends upon the selling expense budget.

The preparation and execution of the selling expense budget must be carefully controlled because the results of most selling expenses, especially advertising, are intangible, and, consequently, it is difficult to determine whether the expenditure is justifiable. Moreover, it is difficult to determine the proper amount of such expenditures by comparison with the expenditures of other businesses, for standards for measuring such expenditures are but poorly developed. The sales manager should be placed in control of selling expenses, and he should be given considerable

authority in connection with the making of the estimates of selling expense and the actual incurring of selling expenses, the budget plans being approved by the budget committee. The sales manager is thus given the responsibility of making wise and proper expenditures for selling expenses, for authority means responsibility.

The selling expense budget contains estimates for each of the classes of expense. One classification of selling expense is as follows:

1. Sales Office Expense
2. Salesmen's Salaries and Expenses
3. Shipping Expense
4. Advertising

Sales office expense will not vary greatly from year to year, and the expenses of the preceding year are, therefore, used as a basis for the estimate. Starting with the number of employees and their salaries for the past year, allowance is first made for any possible increase or decrease in the number of employees because of an expected increase or decrease in sales or for any other reason. If a change in salaries is contemplated, this must also be allowed for. Other sales office expenses such as that for stationery and postage, must also be estimated on the basis of increase or decrease compared with last year's expense.

Salesmen's salaries and expenses are, likewise, estimated by determining the possible increases or decreases as compared with last year. If the salesmen are paid commissions on sales in lieu of salary, the estimate of sales commissions may best be made by using the data for estimated sales as already compiled for the sales budget.

Shipping expense includes the expense of the shipping room, drayage to the railway station, and freight out.

These expenses for a manufacturing concern correspond to delivery expense for a retail or wholesale establishment. They must be carefully studied to eliminate possible waste. In making the estimates, allowance must be made for any change in policy of the company. Of course, the expenses may be expected to increase as the sales of the company increase, and the estimate of sales, which has been made in the sales budget, must be available before a reliable estimate of shipping expense can be made.

Advertising expense usually constitutes a large percentage of the selling expense, and frequently advertising is considered so important that it is placed in charge of a separate executive called the advertising manager who reports directly to the president of the corporation or the general manager. A business may easily increase or decrease its expenditure for advertising, and it is, therefore, best to determine carefully in advance the amount which is to be spent. The advertising appropriation should be considered the limit of the amount which is to be spent. The amount of this appropriation may be determined by any one of the following methods:

1. As a percentage of the sales of the preceding period, plus or minus a certain percentage, say 5 per cent. This method is not very satisfactory because it has no particular relation to the needs of the period in which the funds are to be expended.

2. As a percentage of the sales of the current period. This method is simple, but it has the disadvantage that the advertising expense fluctuates unduly with changes in prices.

3. On the estimated sales of the current period, allowing a definite advertising expense for each unit of goods to be sold. If this method is used, the advertising appropriations

will not fluctuate widely because units sold do not vary as much as do the returns from sales.

The selling expense estimates may be built up best by the use of standards. For example, the 5 per cent allowance, just referred to, may be a standard which has been used over a period of years. Similar standards may be developed in connection with other expenses; and the standards may be used in the preparation of the budget.

Purchases are estimated through the purchase budget.—

In planning a work program for a succeeding period, it is most important that a careful estimate of purchases be made. This will enable the purchasing department to plan its buying, it will serve notice to the budget committee that certain financial requirements must be met, and it will acquaint the treasurer with the probable amount of disbursements. The amount of raw material to be purchased depends upon the probable amount of finished goods that will be needed to supply sales orders and the amount of raw material needed to manufacture each unit of finished goods. The inventory of raw material on hand at the beginning of the period and the estimated inventory to be on hand at the close of the period must also be taken into consideration. The production department should establish standards of production and inventory requirements from which the estimates of production are made. To illustrate, let us assume that the production department has found that three pounds of pig iron are required in the manufacture of a certain kind of valve. If the production of 1,000 valves is necessary to fill sales orders for the period, 3,000 pounds of pig iron will be needed for production. If the beginning inventory of material is 600 pounds and an ending inventory of 400 pounds is considered desirable, the quantity to be purchased is 2,800 pounds.

The materials to be used during the year must, of course, be purchased in anticipation of the requirements of the production department. A proper distribution of the purchases throughout the year has the advantage of avoiding the tying up of capital in inventory, and also saves storage space and insurance on stock and other carrying charges. Of course the stock must always be large enough to meet the requirements of the production department and also to provide a margin for emergencies. How this problem may be solved by the use of a perpetual inventory record or balance of stores record has been explained in a previous chapter. It should be pointed out, however, that where large quantities of materials are bought, such as pig iron or coal, it is often economical to buy by contract the supplies for the entire year, the supplies to be delivered as needed.

The personnel budget contains an estimate of the labor requirements.—Prior to the Great War, the management of personnel problems was decentralized, the laborers needed in each department of the plant being employed and discharged by the foreman of the particular department. Under such conditions, if an employee failed to meet the requirements of the department in which he was employed, he was likely to be discharged without being given a chance to show that he was qualified for a position in some other department. In many concerns, the matter of hiring, promoting, transferring, and discharging has now been placed under the jurisdiction of a personnel manager. The personnel manager is in a position to budget the labor requirements of the company because he is charged with the duty of procuring the workers for all departments of the plant.

The personnel budget must indicate the labor requirements in terms of both labor cost and number of employees to be required. The estimate of labor cost is for the in-

formation of the treasurer, while the estimate of laborers required is for the information of the personnel manager himself in securing the necessary employees to do the work. In the preparation of the estimates, the personnel department must obtain the assistance of the production department. The production department is in a position to analyze the labor requirements in the manufacture of each commodity or to determine the number of labor hours required for each process of manufacture. The cost of direct labor per unit of product in the past may be used as a starting point in determining the cost of direct labor for the current period. When the labor requirements have been determined from a study of the production program, and the probable wage rates have been determined from a consideration of conditions in the labor market and a study of the labor policy of the company, the total labor cost for the current period may be estimated.

An estimate of labor requirements should first be prepared by the production department so that there will be no duplication of data. This estimate is then submitted to the personnel department which sends it to the payroll section for an estimate of costs. The labor estimates are submitted to the personnel manager for his consideration before the completed personnel budget goes to the budget committee. The personnel manager should have control and supervision over the execution of the personnel budget.

Manufacturing expenses are estimated in a separate budget.—An estimate of manufacturing expense is needed by the budget committee in making up the sales program, and by the treasurer so that he may know what expenditures he will be called upon to make. Estimates of materials, labor, and manufacturing expense, are necessary in order to arrive at the estimated cost of manufacture.

The estimate of manufacturing expense is based upon the estimate of production. The cost accounting department, which may prepare the manufacturing expense budget, has records of manufacturing expense for the preceding period. Taking into consideration the distinction between the manufacturing expenses which remain fixed and those which vary from period to period, the expenses can be adapted to any contemplated change in the production program.

In preparing a manufacturing expense budget, various changes in the original estimate, as prepared by the production manager, may be made by the manufacturing departments concerned. The revised estimates are returned to the production manager. The data are supplemented by estimates of purchases by the purchasing agent. The revised estimates are then submitted to the budget committee directly or to a controller acting as its secretary.

Whether the budget is prepared by the cost accounting department or by some other department, control should be secured by the use of monthly reports submitted to the budget committee which compares the actual and the estimated manufacturing expense

Plant and equipment expenditures are controlled through the budget.—The plant and equipment should be gone over carefully and classified to determine what expenditures are necessary. Only those outlays should be made which will increase the net income and yield a satisfactory return on the investment. This budget contains such information as the value of the equipment at the beginning of the period, the estimated depreciation and repairs, the estimated cost of new equipment and its depreciation and repairs, and the value of the equipment at the end of the period. The information is supplied by an executive in charge of production, assisted by the plant engineer, the individual in charge of

works maintenance, and the works engineer department, if the plant is large enough to warrant having these employees.

In executing a plant and equipment budget, a proper control requires that expenditures be made after proper requisitions have been received. Minor expenditures may readily be passed upon by the production manager, but expenditures of large amounts should have the approval of the budget committee. Any repairs may be approved by the department heads. Sometimes equipment is manufactured by the plant itself. Where this is the case, the costs should be as carefully recorded as if the order were being produced for customers. Monthly reports are prepared which show comparisons between the appropriations and the amounts actually expended. The reports are submitted to the executive in charge of plant and equipment maintenance, to the financial executive, and to the budget committee. It is most difficult, of course, to secure absolute coördination between the appropriations and the actual expenditures, and an allowance is sometimes placed in the budget to provide for contingencies such as the rising cost of material and equipment, labor troubles, accidents, and decreased production.

The financial budget is based upon all of the other budgets.—The financial budget is a summary of the cash receipts and cash disbursements for the budget period. It shows the cash expected to be received from each source, such as cash sales, collections from credit sales, dividends and interest from stocks and bonds owned, and sale of securities or fixed assets. It shows how much cash must be disbursed to meet the claims against the business, such as payments for materials and supplies purchased, wage and salary payments, taxes and insurance, fixed assets pur-

chased, and dividend and interest payments. It shows also the bank loans which will have to be secured at certain months of the year to cover an excess of disbursements over receipts and the bank loans which will be repaid at other months when receipts exceed disbursements.

To prepare the financial budget, certain ratios and standards must be developed. For example, percentage of the total sales which are made for cash may be determined from the ratios of past sales. The cash received from credit sales must be estimated by determining the usual period of time elapsing between the sales and the collection, and allowance must also be made for losses on bad debts, sales returns and allowances, and cash discounts. Dividends and interest income may be determined with a considerable degree of accuracy, while the expected receipts from the sale of fixed assets may be determined from the budget of plant and equipment. Cash disbursement for materials and supplies purchased may be estimated from the purchases budget, allowance being made for accounts payable on the books at the beginning and at the end of the year, and the usual credit period allowed. Disbursements for expenses may be estimated from the various expense budgets, allowance being made for accruals on the books at the beginning and at the end of the year. Disbursements on account of equipment purchased may be determined from the plant and equipment budget, and, in this case also, allowance must be made for the terms granted by creditors.

Although the usual budget is for a period of only one year, the financial plans must frequently be made for a much longer period of time. Many corporations raise a part of their capital by means of long-time loans, and the needs of the business for funds to be raised from bonds must be anticipated many months or even years in advance. The

means of meeting maturing bond issues must also be provided for, long before the maturity date. To the extent that the financial budget makes provision for these needs, the financial budget is more than a summary of the other budgets.

The control of a finance budget is most important. Monthly reports should be made so that disbursements shall not exceed the allowance for that period. There should be constant comparison between the estimated and actual collections. The control feature makes for the ultimate success of the finance budget, and this phase is difficult for the same reasons that the preparation of the finance budget is difficult. It will be seen that this budget concerns the business as a whole, so that there must be coöperation of all department heads to make for its success.

As a part of the financial budget, an estimate must be made of the profitableness of the entire plan. This requires that the total estimated income of the business be compared with the total estimated expenses to show the profit for the year. If the program is to result in a satisfactory profit, it may have to be revised at certain points. The estimates of income and expense may be arranged in the form of an estimated statement of income and expense, and they may also be shown graphically as illustrated below.

Dividends					
12 %	35 %	8 %	25 %	10 %	6 % 4 %
Material	Labor	Mfg. expense	Selling expense	Adm. expense and financial	To surplus

Figure 17.—ESTIMATED DISTRIBUTION OF INCOME

Control in the execution of the budget is important.—There are three very important steps in the budget procedure, the first two of which have been discussed:

1. The making of the estimates
2. The revision of the estimates
3. The execution of the budget

However well the budget may be made and revised, it has little significance as a work program if it is poorly executed. Frequent budget committee meetings will show whether or not the various departmental heads have conformed with the program. If, for example, the production department fails to supply the sales department with the required finished product, the production manager must account for his failure to the budget committee. Or, if the personnel manager spends more than his monthly allotment, he must account for his excess expenditure to the budget committee.

It may happen, because of forces over which the company has no control, that sales fall off to such an extent that the budget must be revised during the course of the year. This, of course, will change the demands upon all departments. Whether or not this is the state of affairs will be disclosed in committee meetings or by frequent reports of department heads. Reports respecting departmental activities should be prepared monthly and should be sent to every member of the budget committee. This is necessary if the greatest advantages are to be obtained from the use of the business budget.

The reports which are rendered to show actual accomplishment must be prepared in the exact form in which the original estimates were prepared. Since the estimates of expense and of expenditures for equipment are arranged according to departments, the reports of expenses and of expenditures must also be prepared by departments. The classification of expenses previously used in this book, which is the classification most frequently used, is a division of

expenses into manufacturing, selling, and administrative expenses. If there are only three departments of the business, namely the manufacturing, selling, and financial and general administrative departments, this classification is satisfactory. But if purchasing and records and reports constitute separate departments, then it becomes necessary to maintain a group of expense accounts for each of them, in order that the actual expense of each department may be compared with that estimated. A classification of equipment by departments should also be maintained in order that depreciation, taxes, insurance, and repairs, may be correctly charged.

There are outstanding advantages in the use of the business budget.—Chief among the advantages are the following:

1. The budget serves as a financial program. It consists of an estimate of cash receipts based upon the sales program and the probable collections; an estimate of cash disbursements based upon the various departmental estimates; a plan indicating how the problem will be solved in case cash disbursements should exceed cash receipts.

2. It serves to coördinate sales and production. The sales and production departments must work together so that no more will be produced than the sales program calls for.

3. It serves to coördinate sales and production with finance. Sales and production are usually the most important activities in the manufacturing concern. These are largely dependent upon the financial requirements.

4. It serves to coördinate all of the activities of the business. The meetings of the budget committee, which is composed of all of the departmental heads, tend to bring before each the problems of the others, so that an effort is made to secure a well conducted program.

5. It serves to control expenditures. Each department is required to make an estimate of its probable expenditures for the approval of the budget committee. If the estimate be passed upon favorably, the estimate is the amount allowed for the succeeding period. Monthly reports show whether or not the allotment is being exceeded.

The business budget has its limitations.—The business budget cannot be expected to solve all of the problems of business administration. The principal limitations are as follows:

1. The budget is based upon estimates. There is no possibility of foretelling with absolute accuracy what the sales or expenses will be. Sales are based upon demand, and demand is an indefinite thing because it depends upon the ideas and tastes of every individual who makes purchases. It is also very difficult to make an accurate estimate of the probable expenditures, because costs of materials and services fluctuate from time to time. The best that can be done is to make an estimate and then to check carefully the execution of the plans.

2. Budgetary control cannot be perfected immediately. It is to be expected that when a budgetary system is first installed, the estimates will not be accurate. But if careful records are kept and attempts are made to ascertain the reasons for the mistakes, considerable accuracy may soon be attained.

3. The budget will not function unless it be properly executed. The preparation and revision of the budget constitute only a part of the procedure; the execution is the other part. To make the budget effective, reports of accomplishment must be promptly made and carefully studied.

QUESTIONS FOR DISCUSSION

1. Draw up a simple financial budget for a family of five persons. The father earns \$250 a month. Two sons earn money during the summer and each turns \$50 into the family income. The family receives \$400 a year from investments.
2. Explain how the budget may be used in the administration of commercial enterprises.
3. What organization would you recommend in industrial undertakings to aid in securing the most effective administration of the budget? Draw an organization chart.
4. How is the sales budget prepared? Who should prepare the estimates? Who should be made responsible for the execution of the sales budget?
5. What checks to secure the faithful execution of a budget do you recommend? What do you believe is the proper length of the budget period? Does this vary with the type of business?
6. How is a selling expense budget set up? What particular advantage is there in classifying selling expense for budgetary purposes? How are the probable advertising expenses arrived at?
7. How is a purchase budget prepared? Are records, standards, and reports of any assistance in setting up a purchase budget? If so, in what respects?
8. Should the personnel manager prepare the labor budget, or should this budget be prepared by the production manager?
9. What problems arise in preparing a manufacturing expense budget? What should be used as a basis for this estimate?
10. What necessity is there for a plant and equipment budget? What check is there upon the execution of this budget? How is this budget simplified in the light of modern conditions?
11. In what respect is the financial budget a combination of the budgets of all departments? Who should prepare the financial budget? Are there any checks upon the execution of this budget?
12. Explain how the budgets are revised by the budget committee. Can you see any advantage in having the heads of the various departments as members of this committee?
13. Give examples and explain some of the advantages of the use of the budget. What are some of its limitations?

14. "A definite line of authority and accountability is essential to efficient administration." What does this mean?

15. "The accountant is an historian and not a prophet." What does this mean? Is it in conflict with the use of the budget?

16. Give illustrations of general plans and policies of a business which may affect its sales estimates.

17. "The sales estimate is a combination of several estimates." Explain.

18. "A budget, like any other administrative device, should not restrain management from exercising its legitimate functions, it should aid it by providing information which will serve as the basis of judgment." Explain.

19. "The planning of long time capital requirements and the planning of every day cash needs are two entirely different questions and have no relation to each other." Do you agree with this?

PROBLEMS

1. Prepare reports showing a desirable organization for budgetary control, using the following organizations:

(1) Wm. M. Day, retail druggist.

(2) Wm. M. Day and Alfred A. Purcell, partners in the same business.

(3) Day & Purcell Drug Company, Incorporated.

2. The Queen City Manufacturing Company has its general offices in Cincinnati. Its four factories are located at Lexington, Louisville, Dayton, and Cincinnati. There are twenty-five branches scattered throughout the middle west. The various salesmen report to their branch managers; the branch managers report to one of the five district managers; the district managers report to the sales manager in the home office.

The company produces all of the articles it sells, and the marketing is done entirely through the branches. The branches keep most of the goods they sell in stock; the remainder are secured from the factories.

Write a report to the president setting forth:

(1) The best sales analysis to use in preparing a sales budget.

(2) The best procedure to follow in setting up and enforcing the sales budget.

(3) The value of such a sales budget in administration.

3. The controller of the Ajax Manufacturing Company suggests the following ways of cutting down expenses:

- (1) Lessen the number of reports which are being made.
- (2) Reduce the daily allowance to salesmen.
- (3) Reduce the amount of correspondence.
- (4) Cease hiring experts, such as a certified public accountant who audits the books.
- (5) Use letters instead of telegrams.
- (6) Have more buying by mail instead of sending buyers to metropolitan areas to do the purchasing.
- (7) Salesmen should be directed to make demonstrations on Saturday afternoons. No expenses for Sunday allowed.
- (8) No use of automobiles by salesmen.
- (9) Cut down the commission allowed salesmen.
- (10) Cut down on advertising.
- (11) Do away with a few branches and combine territories.
- (12) Reduce repairs.

Write a report to the president stating:

- (1) The advisability of using these methods to cut down expense.
- (2) How records and reports may be used to determine the merits of each suggestion.

REFERENCES FOR FURTHER STUDY

THE BUDGET:

McKinsey, *Budgetary Control*

White, *Business Management*, pp. 332-353

Taylor, *Municipal Budget Making*

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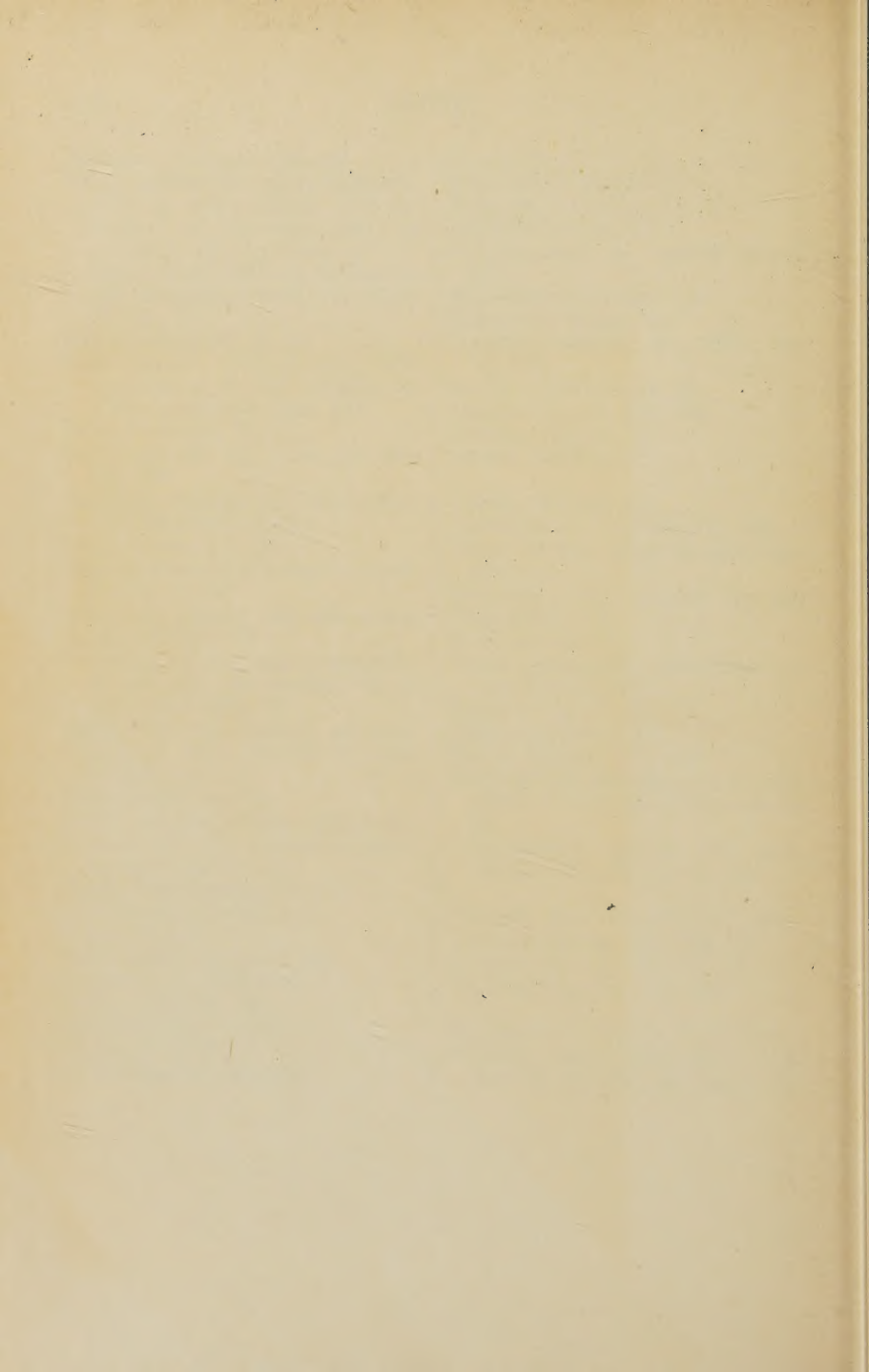
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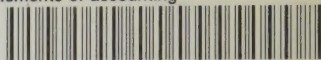
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